

2
3
87

VOLUME 72

W. R. No. 1001

NUMBER 2

UNITED STATES DEPARTMENT OF COMMERCE

JOSEPH H. JOHNS, Secretary

WILLIAM C. BROWN, Chief

F. W. Reinhardt, Chief

MONTHLY WEATHER REVIEW

FEBRUARY 1943

CONTENTS

| | Page | | Page |
|--|------|--|------|
| METEOROLOGICAL AND ORIGINATOLOGICAL DATA: | | SOLAR RADIATION AND SUNSPOT DATA—Continued. | |
| Aerological Observations..... | 17 | Positions, Areas, and Counts of Sunspots..... | 26 |
| River Stages and Floods..... | 18 | Provisional Relative Sunspot Numbers for November | |
| Climatological Data..... | 21 | and December 1942, and January 1943..... | 27 |
| SOLAR RADIATION AND SUNSPOT DATA: | | | |
| Solar Radiation Observations..... | 25 | CHARTS I-VII. | |



CORRECTION

MONTHLY WEATHER REVIEW, January 1943, vol. 71,
page 12, the main heading for this section should be
"JANUARY 1943," not "DECEMBER 1942."

MONTHLY WEATHER REVIEW

Editor, EDGAR W. WOOLARD

VOL. 71, No. 2
W. B. No. 1379

FEBRUARY 1943

CLOSED APRIL 5, 1943
ISSUED MARCH 4, 1943

METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR FEBRUARY 1943

(Climate and Crop Weather Division, J. B. KINER, in charge)

AEROLOGICAL OBSERVATIONS

NOTICE.—Effective with the December 1942 issue, the publication of table 1 (RAOB summaries) was discontinued indefinitely.—EDITOR.

TABLE 2.—Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during February 1943. Directions given in degrees from north ($N=360^\circ$, $E=90^\circ$, $S=180^\circ$, $W=270^\circ$). Velocities in meters per second

| Altitude (meters) m. s. l. | Abilene, Tex. (538 m.) | | | Albuquerque, N. Mex. (1,630 m.) | | | Atlanta, Ga. (299 m.) | | | Billings, Mont. (1,095 m.) | | | Bismarck, N. Dak. (512 m.) | | | Boise, Idaho (870 m.) | | | Brownsville, Tex. (7 m.) | | | Buffalo, N. Y. (220 m.) | | | Burlington, Vt. (132 m.) | | | Charleston, S. C. (17 m.) | | | Cincinnati, Ohio (152 m.) | | | Denver, Colo. (1,627 m.) | | | El Paso, Tex. (1,196 m.) | | |
|----------------------------------|------------------------------|-----------|----------|---------------------------------------|-----------|----------|-----------------------------|-----------|----------|----------------------------------|-----------|----------|----------------------------------|-----------|----------|-----------------------------|-----------|----------|--------------------------------|-----------|----------|-------------------------------|-----------|----------|--------------------------------|-----------|----------|---------------------------------|-----------|----------|---------------------------------|-----------|----------|--------------------------------|-----------|----------|--------------------------------|-----|------|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | | | |
| Surface..... | 28 | 277 | 2.5 | 28 | 275 | 2.7 | 28 | 293 | 4.0 | 26 | 258 | 4.3 | 26 | 311 | 4.3 | 26 | 251 | 0.5 | 28 | 126 | 3.3 | 23 | 254 | 6.0 | 26 | 216 | 1.7 | 28 | 249 | 2.2 | 27 | 252 | 3.2 | 27 | 320 | 2.6 | 28 | 260 | 2.4 |
| 500..... | 28 | 259 | 3.2 | 28 | 277 | 2.7 | 28 | 273 | 4.8 | 26 | 271 | 6.1 | 24 | 306 | 8.9 | 26 | 236 | 0.4 | 28 | 148 | 4.4 | 23 | 251 | 9.1 | 26 | 232 | 4.1 | 28 | 247 | 4.7 | 27 | 253 | 5.0 | 27 | 253 | 5.0 | 27 | 253 | 5.0 |
| 1,000..... | 27 | 268 | 4.6 | 28 | 277 | 2.7 | 27 | 276 | 7.6 | 26 | 269 | 8.9 | 22 | 308 | 11.0 | 26 | 209 | 1.3 | 23 | 282 | 2.7 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 1,500..... | 27 | 277 | 7.2 | 28 | 270 | 3.0 | 23 | 281 | 11.7 | 24 | 283 | 11.1 | 17 | 304 | 11.9 | 26 | 218 | 2.3 | 20 | 276 | 3.9 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 2,000..... | 27 | 276 | 10.1 | 28 | 275 | 3.7 | 20 | 286 | 13.4 | 23 | 291 | 13.0 | 14 | 304 | 14.2 | 26 | 256 | 4.2 | 18 | 264 | 4.2 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 2,500..... | 25 | 277 | 12.4 | 28 | 281 | 6.4 | 17 | 290 | 14.3 | 21 | 297 | 13.0 | 14 | 305 | 16.4 | 24 | 261 | 5.3 | 17 | 274 | 5.9 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 3,000..... | 24 | 276 | 16.2 | 27 | 285 | 11.1 | 16 | 286 | 16.6 | 18 | 295 | 14.2 | 12 | 314 | 17.5 | 20 | 291 | 6.1 | 16 | 278 | 12.2 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 4,000..... | 20 | 279 | 16.6 | 26 | 290 | 12.4 | 13 | 293 | 21.1 | 15 | 288 | 16.0 | 11 | 314 | 18.4 | 19 | 290 | 7.1 | 15 | 279 | 15.9 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 5,000..... | 19 | 277 | 18.7 | 26 | 283 | 15.0 | 12 | 287 | 22.4 | 13 | 296 | 18.6 | 10 | 326 | 22.2 | 16 | 306 | 5.5 | 14 | 266 | 21.0 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 6,000..... | 15 | 287 | 20.7 | 20 | 292 | 16.6 | 13 | 296 | 18.1 | 13 | 296 | 18.6 | 10 | 326 | 22.2 | 16 | 306 | 5.5 | 14 | 266 | 21.0 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 8,000..... | 11 | 286 | 22.6 | 17 | 288 | 19.5 | 13 | 296 | 18.1 | 13 | 296 | 18.6 | 10 | 326 | 22.2 | 16 | 306 | 5.5 | 14 | 266 | 21.0 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 10,000..... | 11 | 286 | 22.6 | 17 | 288 | 19.5 | 13 | 296 | 18.1 | 13 | 296 | 18.6 | 10 | 326 | 22.2 | 16 | 306 | 5.5 | 14 | 266 | 21.0 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 12,000..... | 11 | 286 | 22.6 | 17 | 288 | 19.5 | 13 | 296 | 18.1 | 13 | 296 | 18.6 | 10 | 326 | 22.2 | 16 | 306 | 5.5 | 14 | 266 | 21.0 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |
| 14,000..... | 11 | 286 | 22.6 | 17 | 288 | 19.5 | 13 | 296 | 18.1 | 13 | 296 | 18.6 | 10 | 326 | 22.2 | 16 | 306 | 5.5 | 14 | 266 | 21.0 | 11 | 261 | 14.1 | 17 | 263 | 9.8 | 26 | 279 | 7.9 | 21 | 268 | 10.4 | 27 | 268 | 10.4 | 27 | 268 | 10.4 |

| Altitude (meters) m. s. l. | Ely, Nev. (1,910 m.) | | | Grand Junction, Colo. (1,413 m.) | | | Greensboro, N. C. (271 m.) | | | Havre, Mont. (767 m.) | | | Jacksonville, Fla. (16 m.) | | | Joliet, Ill. (178 m.) | | | Las Vegas, Nev. (573 m.) | | | Little Rock, Ark. (88 m.) | | | Medford, Oreg. (410 m.) | | | Miami, Fla. (15 m.) | | | Mobile, Ala. (66 m.) | | | Nashville, Tenn. (194 m.) | | | New York, N. Y. (15 m.) | | |
|----------------------------------|-------------------------|-----------|----------|--|-----------|----------|----------------------------------|-----------|----------|-----------------------------|-----------|----------|----------------------------------|-----------|----------|--------------------------|-----------|----------|--------------------------------|-----------|----------|---------------------------------|-----------|----------|-------------------------------|-----------|----------|---------------------------|-----------|----------|-------------------------|-----------|----------|---------------------------------|-----------|----------|-------------------------------|-----|------|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | | | |
| Surface..... | 26 | 168 | 0.6 | 28 | 323 | 0.9 | 26 | 263 | 4.0 | 27 | 260 | 2.0 | 24 | 339 | 0.5 | 27 | 268 | 3.5 | 28 | 27 | 0.8 | 28 | 255 | 2.6 | 28 | 13 | 0.3 | 28 | 112 | 1.2 | 27 | 250 | 2.2 | 27 | 271 | 3.2 | 25 | 263 | 4.7 |
| 500..... | 26 | 168 | 0.6 | 28 | 323 | 0.9 | 26 | 263 | 4.0 | 27 | 260 | 2.0 | 24 | 339 | 0.5 | 27 | 268 | 3.5 | 28 | 27 | 0.8 | 28 | 255 | 2.6 | 28 | 13 | 0.3 | 28 | 112 | 1.2 | 27 | 250 | 2.2 | 27 | 271 | 3.2 | 25 | 263 | 4.7 |
| 1,000..... | 26 | 168 | 0.6 | 28 | 323 | 0.9 | 26 | 263 | 4.0 | 27 | 260 | 2.0 | 24 | 339 | 0.5 | 27 | 268 | 3.5 | 28 | 27 | 0.8 | 28 | 255 | 2.6 | 28 | 13 | 0.3 | 28 | 112 | 1.2 | 27 | 250 | 2.2 | 27 | 271 | 3.2 | 25 | 263 | 4.7 |
| 1,500..... | 26 | 168 | 0.6 | 28 | 323 | 0.9 | 26 | 263 | 4.0 | 27 | 260 | 2.0 | 24 | 339 | 0.5 | 27 | 268 | 3.5 | 28 | 27 | 0.8 | 28 | 255 | 2.6 | 28 | 13 | 0.3 | 28 | 112 | 1.2 | 27 | 250 | 2.2 | 27 | 271 | 3.2 | 25 | 263 | 4.7 |
| 2,000..... | 26 | 184 | 0.6 | 28 | 323 | 0.9 | 26 | 263 | 4.0 | 27 | 260 | 2.0 | 24 | 339 | 0.5 | 27 | 268 | 3.5 | 28 | 27 | 0.8 | 28 | 255 | 2.6 | 28 | 13 | 0.3 | 28 | 112 | 1.2 | 27 | 250 | 2.2 | 27 | 271 | 3.2 | 25 | 263 | 4.7 |
| 2,500..... | 26 | 229 | 2.6 | 27 | 226 | 2.7 | 23 | 285 | 12.9 | 26 | 296 | 10.4 | 25 | 272 | 7.3 | 18 | 288 | 13.2 | 28 | 241 | 0.9 | 25 | 273 | 11.8 | 27 | 216 | 4.1 | 23 | 281 | 3.8 | 22 | 296 | 9.7 | 20 | 279 | 11.2 | 15 | 288 | 13.5 |
| 3,000..... | 26 | 300 | 2.3 | 26 | 243 | 4.8 | 20 | 289 | 18.4 | 21 | 295 | 11.4 | 21 | 273 | 13.2 | 18 | 294 | 19.1 | 25 | 264 | 1.6 | 24 | 281 | 14.3 | 24 | 224 | 4.7 | 22 | 275 | 5.1 | 20 | 302 | 13.4 | 19 | 285 | 13.9 | 10 | 278 | 14.0 |
| 4,000..... | 22 | 284 | 5.0 | 23 | 287 | 6.8 | 19 | 290 | 20.0 | 16 | 294 | 13.4 | 13 | 292 | 14.0 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 21 | 282 | 16.8 | 24 | 221 | 5.4 | 20 | 278 | 7.4 | 15 | 293 | 16.1 | 18 | 292 | 15.0 | 16 | 298 | 20.0 |
| 5,000..... | 17 | 283 | 7.2 | 15 | 282 | 7.7 | 17 | 293 | 22.9 | 11 | 292 | 13.0 | 10 | 285 | 15.9 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 19 | 277 | 19.4 | 21 | 220 | 5.2 | 15 | 290 | 10.1 | 11 | 293 | 17.4 | 14 | 298 | 20.0 | 12 | 297 | 22.9 |
| 6,000..... | 17 | 275 | 8.2 | 12 | 283 | 7.8 | 16 | 299 | 25.9 | 11 | 292 | 13.0 | 10 | 285 | 15.9 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 19 | 277 | 19.4 | 21 | 220 | 5.2 | 15 | 290 | 10.1 | 11 | 293 | 17.4 | 14 | 298 | 20.0 | 12 | 297 | 22.9 |
| 8,000..... | 15 | 274 | 9.6 | 10 | 301 | 10.7 | 11 | 301 | 20.1 | 11 | 292 | 13.0 | 10 | 285 | 15.9 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 19 | 277 | 19.4 | 21 | 220 | 5.2 | 15 | 290 | 10.1 | 11 | 293 | 17.4 | 14 | 298 | 20.0 | 12 | 297 | 22.9 |
| 10,000..... | 14 | 269 | 10.0 | 10 | 301 | 10.7 | 11 | 301 | 20.1 | 11 | 292 | 13.0 | 10 | 285 | 15.9 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 19 | 277 | 19.4 | 21 | 220 | 5.2 | 15 | 290 | 10.1 | 11 | 293 | 17.4 | 14 | 298 | 20.0 | 12 | 297 | 22.9 |
| 12,000..... | 10 | 301 | 13.9 | 10 | 301 | 10.7 | 11 | 301 | 20.1 | 11 | 292 | 13.0 | 10 | 285 | 15.9 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 19 | 277 | 19.4 | 21 | 220 | 5.2 | 15 | 290 | 10.1 | 11 | 293 | 17.4 | 14 | 298 | 20.0 | 12 | 297 | 22.9 |
| 14,000..... | 10 | 301 | 13.9 | 10 | 301 | 10.7 | 11 | 301 | 20.1 | 11 | 292 | 13.0 | 10 | 285 | 15.9 | 10 | 305 | 20.1 | 25 | 286 | 3.2 | 19 | 277 | 19.4 | 21 | 220 | 5.2 | 15 | 290 | 10.1 | 11 | 293 | 17.4 | 14 | 298 | 20.0 | 12 | 297 | 22.9 |

| Altitude (meters) m. s. l. | Oakland, Calif. (8 m.) | | | Oklahoma City, Okla. (402 m.) | | | Omaha, Nebr. (306 m.) | | | Phoenix, Ariz. (388 m.) | | | Rapid City, S. Dak. (982 m.) | | | St. Louis, Mo. (181 m.) | | | St. Paul, Minn. (225 m.) | | | San Antonio, Tex. (240 m.) | | | San Diego, Calif. (15 m.) | | | Sault Ste. Marie, Mich. (230 m.) | | | Seattle, Wash. (12 m.) | | | Spokane, Wash. (603 m.) | | | Washington D. C. (24 m.) | | |
|----------------------------------|------------------------------|-----------|----------|-------------------------------------|-----------|----------|-----------------------------|-----------|----------|-------------------------------|-----------|----------|------------------------------------|-----------|----------|-------------------------------|-----------|----------|--------------------------------|-----------|----------|----------------------------------|-----------|----------|---------------------------------|-----------|----------|--|-----------|----------|------------------------------|-----------|----------|-------------------------------|-----------|----------|--------------------------------|-----|-----|
| | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | Observations | Direction | Velocity | | | |
| Surface..... | 27 | 266 | 2.4 | 27 | 296 | 2.2 | 27 | 271 | 3.0 | 28 | 130 | 0.3 | 27 | 337 | 6.9 | 28 | 253 | 3.1 | 28 | 281 | 3.5 | 28 | 191 | 0.9 | 27 | 264 | 2.6 | 21 | 290 | 3.4 | 25 | 256 | 1.7 | 23 | 221 | 0.5 | 27 | 263 | 3.1 |
| 500..... | 27 | 98 | 0.1 | 27 | 280 | 2.4 | 27 | 274 | 3.7 | 28 | 35 | 0.4 | 27 | 336 | 7.0 | 28 | 256 | 4.0 | 28 | 227 | 4.6 | 28 | 199 | 1.3 | 27 | 254 | 1.6 | 21 | 278 | 3.9 | 25 | 201 | 3.0 | 23 | 222 | 1.6 | 27 | 275 | 0.4 |
| 1,000..... | 26 | 174 | 1.7 | 27 | 262 | 3.2 | 27 | 282 | 5.8 | 28 | 95 | 0.2 | 27 | 336 | 7.0 | 28 | 259 | 5.9 | 25 | 292 | 7.2 | 26 | 247 | 1.6 | 24 | 140 | 1.7 | 16 | 300 | 5.6 | 21 | 207 | 4.8 | 23 | 222 | 1.6 | 27 | 275 | 0.4 |
| 1,500..... | 25 | 192 | 3.1 | 27 | 283 | 6.5 | 26 | 302 | 8.3 | 27 | 131 | 0.8 | 27 | 331 | 9.0 | 25 | 269 | 8.7 | 21 | 295 | 9.0 | | | | | | | | | | | | | | | | | | |

TABLE 3.—Maximum free-air wind velocities (m. p. s.), for different sections of the United States based on pilot-balloon observations during February 1943

| Section | Surface to 2,500 meters (m. s. l.) | | | | | Between 2,500 and 5,000 meters (m. s. l.) | | | | | Above 5,000 meters (m. s. l.) | | | | |
|----------------------------|------------------------------------|-----------|-----------------------|------|----------------------|---|-----------|-----------------------|------|-------------------|-------------------------------|-----------|-----------------------|------|----------------------|
| | Maximum velocity | Direction | Altitude (m) m. s. l. | Date | Station | Maximum velocity | Direction | Altitude (m) m. s. l. | Date | Station | Maximum velocity | Direction | Altitude (m) m. s. l. | Date | Station |
| Northeast ¹ | 58.2 | w. | 640 | 11 | Nantucket, Mass. | 54.4 | nw. | 3,910 | 8 | Phillipsburg, Pa. | 74.2 | nw. | 9,330 | 10 | Caribou, Me. |
| East-Central ² | 44.0 | ssw. | 2,130 | 10 | Richmond, Va. | 50.0 | w. | 3,450 | 14 | Raleigh, N. C. | 65.2 | w. | 7,430 | 25 | Nashville, Tenn. |
| South-Central ³ | 44.0 | wnw. | 2,500 | 1 | Washington, D. C. | | | | | | | | | | |
| North-Central ⁴ | 41.3 | nw. | 1,050 | 14 | Spartanburg, S. C. | 58.0 | w. | 4,960 | 14 | Charleston, S. C. | 66.0 | w. | 11,900 | 7 | Miami, Fla. |
| Central ⁵ | 41.2 | nnw. | 2,470 | 12 | Williston, N. Dak. | 52.6 | nw. | 5,000 | 13 | St. Paul, Minn. | 60.0 | n. | 7,600 | 17 | S. Ste. Marie, Mich. |
| South-Central ⁶ | 41.6 | ws. | 1,420 | 27 | Fort Wayne Ind. | 46.4 | nw. | 4,590 | 26 | St. Louis, Mo. | 61.6 | w. | 8,880 | 24 | Wichita, Kan. |
| Northwest ⁷ | 42.6 | wnw. | 2,290 | 8 | Oklahoma City, Okla. | 55.3 | nw. | 5,000 | 6 | Waco, Tex. | 80.0 | ws. | 12,280 | 3 | Abilene, Tex. |
| West-Central ⁸ | 45.5 | ws. | 2,380 | 6 | Billings, Mont. | 46.8 | wnw. | 4,830 | 11 | Spokane, Wash. | 62.0 | nnw. | 7,690 | 5 | Great Falls, Mont. |
| Southwest ⁹ | 33.6 | wnw. | 2,290 | 11 | Cheyenne, Wyo. | 52.0 | nnw. | 5,000 | 9 | Reno, Nev. | 74.8 | n. | 11,050 | 3 | Reno, Nev. |
| | 44.0 | ws. | 2,460 | 9 | Roswell, N. Mex. | 58.8 | sse. | 4,170 | 20 | Sandberg, Calif. | 69.6 | ws. | 11,200 | 2 | Tucson, Ariz. |

¹ Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.

² Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.

³ South Carolina, Georgia, Florida, and Alabama.

⁴ Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.

⁵ Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.

⁶ Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.

⁷ Montana, Idaho, Washington, and Oregon.

⁸ Wyoming, Colorado, Utah, northern Nevada and northern California.

⁹ Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

RIVER STAGES AND FLOODS

By C. R. JORDAN

Precipitation during February 1943 was below normal in most sections of the United States. Moderate rains occurred over the interior of the Southeast during the first week of February. There was also moderately heavy precipitation over the northern Pacific coastal area during the early part of the month.

Temperatures during February averaged well above normal over the entire country with the exception of the Florida Peninsula and a small area in southeastern Arizona. The greatest departure from normal was in the northern Great Plains States where the temperature for the month averaged from 8° to 10° above normal. Despite the high average temperatures for the month, the coldest weather of the winter was experienced in the Northeastern States during the middle of the month and a hard freeze was felt as far south as the Gulf coast. Minimum temperatures of 30° or more below zero were reported in New England with temperatures as low as 10° below freezing extending into northern Florida.

Most of the flooding during February resulted from melting snow or ice jams that occurred in several streams when the unseasonably warm weather of early February and again during the latter part of the month caused the ice in many streams to move out early. Fortunately, precipitation during these periods was light. Moderate rains over the Southeast during the first half of February produced some light flooding in that section, but little damage was reported. Moderate floods also occurred in the Columbia River Basin.

St. Lawrence drainage.—The snow cover in the Upper Lakes region was reduced somewhat by the warm weather during the latter part of February. Snow depths at the end of the month ranged from a trace in southern Michigan to 3 feet or more in northern Michigan and Wisconsin. Water content of the snow cover in the portion of the Adirondack Mountain region of New York tributary to the St. Lawrence River averaged about 8 inches.

The Flint River at Columbiaville, Mich., swollen by water from melting snow, rose slightly above flood stage on February 25, when an ice jam formed below the town but no damage resulted.

Atlantic slope drainage.—The snow cover in New England was reduced considerably by the warm weather of February 19–25, but a heavy cover was still present at the end of the month in Vermont and New Hampshire and in the mountains of New York. Maximum depths of more than 3 feet in Maine and 4 feet in some sections of New York were reported. Only a few stations in the mountains of Pennsylvania reported over 6 inches of snow. Ice in the rivers ranged from 10 inches at Hartford, Conn., to about 3 feet in northern Maine. No ice was reported in the rivers of eastern Pennsylvania and New York at the close of the month with the exception of shore ice in the Hudson River at Albany, N. Y.

The Connecticut River was slightly above flood stage at White River Junction, Vt., on February 25, as a result of ice released in the White River overrunning the ice in the Connecticut River at their confluence.

An ice jam formed in the Mohawk River just below Tribes Hill, N. Y., on the morning of February 24. The river rose rapidly to a stage of 24.8 feet (1.8 feet above flood stage) at noon, at which time the gorge broke and the water receded rapidly. There was also light flooding in the vicinity of Schenectady, N. Y., from an ice jam that formed below that point. Damage was negligible.

The unusually warm weather from February 19–24, with temperatures as high as 63° at Binghamton, N. Y., produced relatively heavy run-off from snow melt in the headwaters of the Susquehanna River in New York. The flow was not augmented by precipitation of consequence and the run-off from melting snow was not sufficient to produce serious flooding. Flood stages were exceeded slightly at Sherburne, Greene, and Binghamton, N. Y., on the Chenango River and at Oneonta, Bainbridge, and Vestal, N. Y., on the Susquehanna. Some basements were flooded in low places in the area of Vestal and Westover, N. Y., but otherwise little damage resulted.

Moderate rains during the first week of February, averaging from 0.5 inch to 2.5 inches in the southeastern section, produced light to moderate flooding in most streams along the Atlantic coast from Virginia southward.

The Roanoke River rose to 7 feet above flood stage at Weldon, N. C., on the 9th and nearly 2 feet above flood stage at Williamston, N. C., on the 13th. Damage was confined mostly to prospective crops and to the interruption of business.

The Neuse River exceeded flood stage at a few points and the Cape Fear River crested at a stage of 26.0 feet at Elizabethtown, N. C., on February 8, but did not reach flood stage at stations farther downstream.

Rains averaging about an inch over the Yadkin and upper Pee Dee River Basins on the 6th produced moderate rises in these streams with a crest of 32.3 feet at Cheraw, S. C., on the 7th. No damage was reported.

Rainfall averaged from 2 to 2.5 inches over the Saluda, Broad, and Catawba River Basins on the 6th and caused the Saluda and Broad Rivers to exceed flood stages slightly at a few points. Overflow was slight and no damage was reported.

The Savannah River at Butler Creek, Ga., exceeded flood stage on February 7-8, as a result of precipitation averaging from 1 to 1.5 inches over the basin on the 5th and 6th. Damage was light, being confined mostly to suspension of business.

Moderate rises continued in the Ocmulgee, Oconee, and Altamaha Rivers during the early part of February as a result of precipitation that occurred near the end of January.

East Gulf of Mexico drainage.—The Apalachicola River continued above flood stage at Blountstown, Fla., until the middle of February due to a very slow recession from a crest of 21.9 feet that occurred on January 24. High stages were prolonged by further rains on January 28, and again on February 4 and 5. The only loss from the high stages was the suspension of small industries in the vicinity of Blountstown.

Moderate rains, averaging from 1.5 to 2 inches over the middle Tombigbee and Pearl River Basins on February 4 and 5 caused slight overflows in those streams. The crest in the Tombigbee reached 38.2 feet on February 10 at Lock No. 3; no damage resulted. Overflow in Bogue Chitto River at Franklinton, La., and the Pearl River at Pearl River, La., resulted in little or no loss.

Mississippi system.—Two periods of unusually warm weather during February that resulted in considerable run-off from the heavy snow cover over southwestern Wisconsin raised the Rock River at Moline, Ill., above flood stage from February 8 to 18, and again from February 21 to March 4. The highest stage reached was 11.4 feet on February 25, and no damage of consequence was reported.

Moderate flooding occurred in the Skunk, Des Moines, Illinois, Big Sioux, Floyd, Boyer, Elkhorn, Little Missouri, Heart, Yellowstone, Grand, and Missouri Rivers and at Louisiana and Hannibal, Mo., on the Mississippi River. The flooding resulted mainly from the formation of ice jams in the streams and the overflows, being local, caused little damage in most cases.

The unusually warm period in the Dakota, and Montana from February 17 to 23, melted a great deal of snow in the low-lying areas and swelled the Yellowstone and Little Missouri Rivers in some places to record stages. The peak on the Yellowstone River at Sidney, Mont., exceeded the usual high water flow for that station in June and the Little Missouri at Marmarth, N. Dak., was the highest that has ever been observed. Ice jams of large proportions occurred on both streams. It is estimated that some \$20,000 worth of property, mostly livestock and other farm property, was lost as a result of the rapid rise in the Little Missouri. A farm home was destroyed and 800 head of sheep lost in Richland County, Mont., when flood waters inundated several farms along the Yellowstone River as a result of water backing up from its junction with the Missouri River, following the breaking of ice

jams between Billings and Miles City, Mont. Loss in this area was estimated at \$9,300.

Ice jams occurred on most of the streams in Iowa and some lowlands were inundated in the lower Des Moines River Basin.

Pacific slope drainage.—The Sacramento River at Knights Landing, Calif., remained slightly above flood stage on February 1. This was a continuation of the flood of January 1943.

Rains during the first part of February were followed by moderate flooding of the streams in western Oregon. No damage was reported.

FLOOD-STAGE REPORT FOR FEBRUARY 1943

[All stages in February unless otherwise specified]

| River and station | Flood stage | Above flood stages— dates | | Crest | |
|---|-------------|------------------------------|--------|-----------|----------|
| | | From— | To— | Stage | Date |
| ST. LAWRENCE DRAINAGE | | | | | |
| Lake Huron | | | | | |
| Flint: Columbiaville, Mich..... | Feet 10 | 23 | 27 | Feet 10.6 | 25 |
| ATLANTIC SLOPE DRAINAGE | | | | | |
| Connecticut: White River Junction, Vt..... | 18 | 25 | 25 | 18.4 | 25 |
| Mohawk: Tribes Hill, N. Y..... | 23 | 24 | 24 | 24.8 | 24 |
| Chenango: | | | | | |
| Sherburne, N. Y..... | 8 | 24 | 25 | 8.7 | 24 |
| Greene, N. Y..... | 8 | 24 | 26 | 10.0 | 25 |
| Binghamton, N. Y..... | 16 | 25 | 25 | 16.2 | 25 |
| Susquehanna: | | | | | |
| Oneonta, N. Y..... | 12 | 23 | 27 | 16.0 | 24-25 |
| Bainbridge, N. Y..... | 12 | 25 | 25 | 13.7 | 25 |
| Vestal, N. Y..... | 14 | 24 | 26 | 17.7 | 25 |
| James: Columbia, Va..... | 10 | 2 | 12 | 16.8 | 7 |
| Roanoke: | | | | | |
| Randolph, Va..... | 21 | 6 | 8 | 25.0 | 6 |
| Weldon, N. C..... | 31 | 6 | 10 | 38.3 | 9 |
| Williamston, N. C..... | 10 | Jan. 31 | 23 | 11.9 | 13 |
| Neuse: | | | | | |
| Neuse, N. C..... | 14 | 7 | 9 | 14.9 | 8-9 |
| Smithfield, N. C..... | 13 | Jan. 29 | 2 | 15.0 | Jan. 29 |
| | 13 | 7 | 11 | 15.0 | Feb. 1 |
| | 13 | 1 | 5 | 15.0 | 9-10 |
| Goldsboro, N. C..... | 14 | 10 | 14 | 15.0 | 4 |
| | | (7) | 2 | 16.0 | Jan. 27- |
| Kinston, N. C..... | 14 | 5 | 8 | 14.3 | Feb. 2 |
| | | 15 | 15 | 14.0 | 7 |
| Cape Fear: Lock No. 2, Elizabethtown, N. C..... | 20 | Jan. 30 | 2 | 25.0 | Jan. 31 |
| Pee Dee: | | | | | |
| Cheraw, S. C..... | 30 | 7 | 8 | 32.3 | 7 |
| Mars Bluff Bridge, S. C..... | 17 | (7) | 16 | 20.2 | 3 |
| | | | 16 | 19.8 | 11 |
| Poston, S. C..... | 18 | (7) | 17 | 20.0 | 8 |
| | | | 17 | 19.8 | 15 |
| Saluda: | | | | | |
| Pelzer, S. C..... | 6 | 5 | 8 | 6.8 | 7 |
| Chappells, S. C..... | 13 | 5 | 7 | 16.3 | 6 |
| Broad: Blairs, S. C..... | 14 | 6 | 7 | 15.6 | 7 |
| Savannah: Butler Creek, Ga..... | 21 | 7 | 8 | 21.9 | 7 |
| Ogeechee: Dover, Ga..... | 7 | (7) | 15 | 8.8 | Jan. 25 |
| | | | 15 | 7.5 | 8-9 |
| Ocmulgee: Abbeville, Ga..... | 11 | (7) | 7 | 16.1 | Jan. 25 |
| | | | 7 | 12.7 | 4 |
| Oconee: Mount Vernon, Ga..... | 16 | 4 | 6 | 16.7 | 5 |
| Altamaha: | | | | | |
| Charlotte, Ga..... | 12 | (7) | 18 | 21.4 | Jan. 29 |
| Everett City, Ga..... | 10 | Jan. 30 | 16 | 17.0 | 6 |
| | | | 16 | 12.7 | 3 |
| EAST GULF OF MEXICO DRAINAGE | | | | | |
| Apalachicola: Blountstown, Fla..... | 15 | (7) | 16 | 17.2 | 10-11 |
| Tombigbee: Lock No. 3, Ala..... | 33 | 7 | 12 | 38.2 | 10 |
| Bogue Chitto: Franklinton, La..... | 11 | 6 | 8 | 12.4 | 7 |
| Pearl: Pearl River, La..... | 12 | 9 | 14 | 15.0 | 12 |
| MISSISSIPPI SYSTEM | | | | | |
| Upper Mississippi Basin | | | | | |
| Rock: Moline, Ill..... | 10 | 8 | 18 | 10.7 | 12-18 |
| | | 21 | Mar. 4 | 11.3 | 25 |
| Skunk: Augusta, Iowa..... | 15 | 4 | 9 | 20.0 | 6 |
| | | 12 | 13 | 16.2 | 12 |
| Des Moines: | | | | | |
| Eddyville, Iowa..... | 15 | 4 | 16 | 21.7 | 5 |
| | | 20 | 27 | 18.0 | 27 |
| Tracy, Iowa..... | 14 | 5 | 8 | 15.8 | 6 |

See footnotes at end of table.

FLOOD-STAGE REPORT FOR FEBRUARY 1943—Continued

| River and station | Flood stage | Above flood stages— dates | | Crest | |
|--|-------------|------------------------------|-----|-------------|------------|
| | | From— | To— | Stage | Date |
| MISSISSIPPI SYSTEM—continued | | | | | |
| Upper Mississippi Basin—Continued | | | | | |
| Illinois: | <i>Feet</i> | | | <i>Feet</i> | |
| Beardstown, Ill..... | 14 | 6 | 24 | 16.3 | 14 |
| Morris, Ill..... | 13 | 6 | 8 | 15.2 | 7 |
| Peru, Ill..... | 17 | 4 | 15 | 19.5 | 7 |
| Peoria, Ill..... | 18 | 11 | 12 | 18.1 | 12 |
| Havana, Ill..... | 14 | 8 | 22 | 17.1 | 18 |
| Mississippi: | | | | | |
| Hannibal, Mo..... | 13 | Jan. 27 | 1 | 13.5 | Jan. 28-30 |
| | | 4 | 7 | 14.2 | 5 |
| | | 17 | 19 | 14.2 | 18 |
| | | 7 | 9 | 12.8 | 8 |
| Louisiana, Mo..... | 12 | 14 | 22 | 13.5 | 15 |
| | | | | 14.2 | 20 |
| Missouri Basin | | | | | |
| Big Sioux: Akron, Iowa..... | 12 | 22 | 24 | 15.3 | 24 |
| Floyd: James, Iowa..... | 14 | 3 | 5 | 16.4 | 4 |
| | 18 | 22 | 23 | 17.9 | 22 |
| Grand: Chillicothe, Mo..... | 14 | 4 | 5 | 21.2 | 4 |
| Missouri: Nebraska City, Nebr..... | 15 | 6 | 6 | 15.6 | 6 |
| Ohio Basin | | | | | |
| West Fork: Clarksburg, W. Va..... | 5 | 1 | 1 | 5.0 | 1 |
| West Fork White: Edwardsport, Ind..... | 12 | 5 | 7 | 13.2 | 6 |

Footnotes at end of table.

FLOOD-STAGE REPORT FOR FEBRUARY 1943—Continued

| River and station | Flood stage | Above flood stages— dates | | Crest | |
|---------------------------------------|-------------|------------------------------|-----|----------|--------|
| | | From— | To— | Stage | Date |
| MISSISSIPPI SYSTEM—continued | | | | | |
| Lower Mississippi Basin | | | | | |
| Wolf: Rossville, Tenn..... | Feet 9 | 7 | 7 | Feet 9.0 | 7 |
| PACIFIC SLOPE DRAINAGE | | | | | |
| Sacramento Basin | | | | | |
| Sacramento: Knights Landing, Calif... | 30 | Jan. 30 | 2 | 30.5 | Jan 31 |
| Columbia Basin | | | | | |
| Long Tom: Monroe, Oreg..... | 10 | (¹) | 22 | 12.4 | 8 |
| Santiam: Jefferson, Oreg..... | 13 | 6 | 8 | 17.3 | 7 |
| Luckiamute: Suver, Oreg..... | 25 | { 6 | 9 | 29.4 | 7 |
| | | 12 | 12 | 25.3 | 12 |
| Yamhill: | | | | | |
| Williamina, Oreg..... | 8 | 6 | 7 | 10.4 | 6 |
| Whiteson, Oreg..... | 38 | 7 | 8 | 41.4 | 7 |
| Willamette: | | | | | |
| Harrisburg, Oreg..... | 10 | 5 | 5 | 10.7 | 5 |
| Oregon City, Oreg..... | 12 | 7 | 10 | 13.0 | 9 |

¹ Ice gorge below gage.² Continued from January.³ Fell slightly below flood stage on 2d.

CLIMATOLOGICAL DATA

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of charts, see REVIEW January 1943, p. 15]

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

| Section | Temperature | | | | | | | | Precipitation | | | | | | | |
|------------------------|-----------------|---------------------------|-------------------------------|---------|------|-----------------------------|--------|------|-----------------|---------------------------|-----------------------------|--------|-------------------------|--------|--|--|
| | Section average | Departure from the normal | Monthly extremes | | | | | | Section average | Departure from the normal | Greatest monthly | | Least monthly | | | |
| | | | Station | Highest | Date | Station | Lowest | Date | | | Station | Amount | Station | Amount | | |
| | | | | | | | | | | | | | | | | |
| °F. | °F. | °F. | | | | °F. | | In. | In. | | | | | | | |
| Alabama..... | 50.9 | +2.0 | Dothan..... | 83 | 5 | Valley Head..... | 7 | 15 | 2.30 | -2.91 | Monte Sano..... | 4.49 | 2 stations..... | 0.92 | | |
| Arizona..... | 48.9 | +3.0 | Mohawk..... | 93 | 18 | Wallace Ranger Station..... | -9 | 10 | 1.54 | -81 | Groom Creek..... | 3.09 | 7 stations..... | 0.00 | | |
| Arkansas..... | 47.5 | +2.9 | Benton..... | 83 | 9 | 2 stations..... | 7 | 16 | 1.00 | -2.36 | Crossett..... | 3.87 | Clover Bend..... | 0.16 | | |
| California..... | 49.4 | +1.5 | 5 stations..... | 91 | 13 | Boca..... | -19 | 9 | 2.66 | -1.90 | Squirrel Inn No. 2..... | 15.27 | Blythe Airport..... | 0.00 | | |
| Colorado..... | 32.0 | +4.8 | Cheyenne Wells..... | 79 | 22 | Taylor Park..... | -38 | 4 | .65 | -34 | Cumbres..... | 3.30 | Norwood..... | 0.00 | | |
| Florida..... | 58.4 | -2.0 | Aracadia..... | 90 | 20 | Glen St. Mary..... | 14 | 15 | .80 | -2.34 | Apalachicola..... | 2.79 | Camp Blanding..... | .02 | | |
| Georgia..... | 49.7 | +1.2 | 2 stations..... | 83 | 25 | Clayton..... | 5 | 15 | 1.79 | -3.02 | Dahlonega..... | 4.24 | Brunswick Airport..... | .45 | | |
| Idaho..... | 29.3 | +1.3 | Kootkia..... | 65 | 20 | Island Park Dam..... | -25 | 10 | 1.48 | -27 | Roland..... | 6.42 | Grand View..... | .09 | | |
| Illinois..... | 33.9 | +4.1 | Sparta..... | 75 | 19 | 2 stations..... | -9 | 14 | 1.04 | -88 | Olney..... | 2.36 | Waukegan..... | .49 | | |
| Indiana..... | 33.6 | +3.1 | Tell City..... | 70 | 23 | 3 stations..... | -10 | 15 | 1.47 | -94 | La Porte..... | 3.60 | Monticello..... | .54 | | |
| Iowa..... | 27.5 | +5.1 | Keokuk..... | 71 | 9 | Northwood..... | -20 | 14 | .77 | -31 | Le Claire..... | 1.82 | 2 stations..... | .37 | | |
| Kansas..... | 40.4 | +7.3 | 2 stations..... | 82 | 18 | Goodland..... | 4 | 19 | .59 | -40 | Chanute..... | 1.59 | Kismet (near)..... | .04 | | |
| Kentucky..... | 40.1 | +3.1 | do..... | 73 | 23 | Erlington..... | -5 | 16 | 1.81 | -1.55 | Lynch (near)..... | 3.96 | Murray..... | .70 | | |
| Louisiana..... | 55.5 | +1.8 | Bastrop..... | 84 | 23 | Tallulah..... | 19 | 15 | 2.55 | -1.99 | Lake Charles..... | 7.72 | Plain Dealing..... | .40 | | |
| Maryland-Delaware..... | 36.2 | +3.0 | Fort George G. Meade, Md..... | 75 | 23 | 2 stations..... | -15 | 16 | 2.01 | -98 | Snow Hill, Md..... | 3.92 | Luke, Md..... | .45 | | |
| Michigan..... | 22.8 | +2.6 | Monroe..... | 62 | 23 | Roscommon..... | -39 | 15 | 1.76 | +0.06 | Mancelona..... | 3.92 | Adrian..... | .40 | | |
| Minnesota..... | 14.7 | +2.1 | Windom..... | 59 | 21 | Big Falls..... | -40 | 14 | 1.78 | +0.03 | Pigeon River Bridge..... | 1.93 | Winona..... | .04 | | |
| Mississippi..... | 51.5 | +2.2 | 2 stations..... | 82 | 14 | Water Valley..... | 9 | 15 | 2.49 | -2.34 | Magnolia..... | 6.46 | Moorehead..... | .90 | | |
| Missouri..... | 39.1 | +5.9 | Union..... | 80 | 7 | Goodland..... | -10 | 16 | .94 | -1.11 | Caruthersville..... | 2.16 | Galena..... | .23 | | |
| Montana..... | 26.2 | +4.0 | Hardin..... | 69 | 20 | Babb (near)..... | -37 | 18 | .57 | -19 | Summit..... | 3.70 | 5 stations..... | T | | |
| Nebraska..... | 35.1 | +8.8 | Benkelman..... | 80 | 8 | Gordon..... | -9 | 2 | .37 | -33 | Tekamah..... | 1.20 | 8 stations..... | T | | |
| Nevada..... | 38.8 | +4.8 | 2 stations..... | 82 | 15 | 2 stations..... | -16 | 1 | .83 | -24 | Marlette Lake..... | 7.20 | Coaldale..... | .00 | | |
| New England..... | 23.9 | +1.2 | Weston, Mass..... | 65 | 23 | East Barnet, Vt..... | -46 | 16 | 1.90 | -1.17 | Nantucket, Mass..... | 3.76 | Bethlehem, N. H..... | 1.03 | | |
| New Jersey..... | 32.9 | +2.3 | 2 stations..... | 71 | 23 | Charlottesville..... | -25 | 16 | 2.01 | -1.54 | Toms River..... | 3.46 | Burlington..... | 1.06 | | |
| New Mexico..... | 41.2 | +4.0 | Deming..... | 86 | 7 | Selsor Ranch..... | -21 | 4 | .19 | -52 | Aspen Grove Ranch..... | 1.46 | 48 stations..... | .00 | | |
| New York..... | 24.6 | +2.1 | Dansville..... | 65 | 23 | Stillwater Reservoir..... | -47 | 16 | 2.23 | -45 | Stillwater Reservoir..... | 5.71 | Penn Yan..... | .22 | | |
| North Carolina..... | 44.1 | +1.5 | Scotland Neck..... | 82 | 24 | Mount Mitchell..... | -10 | 16 | 1.97 | -2.02 | Nantabala..... | 5.37 | Rockingham..... | .57 | | |
| North Dakota..... | 15.1 | +5.4 | Marmarth..... | 62 | 21 | Willow City..... | -32 | 1 | .50 | +0.83 | Oakes..... | 1.91 | Hannah..... | .05 | | |
| Ohio..... | 32.1 | +2.7 | Ironton..... | 73 | 23 | Medina (near)..... | -13 | 15 | 1.68 | -91 | Middletown..... | 3.12 | Ottawa..... | .72 | | |
| Oklahoma..... | 47.0 | +5.9 | 2 stations..... | 85 | 9 | Buffalo..... | 7 | 16 | .63 | -77 | Flashman Tower..... | 1.60 | Goodwell..... | T | | |
| Oregon..... | 37.1 | +1.8 | Powers..... | 81 | 13 | Wickiup Dam..... | -14 | 1 | 2.05 | -1.13 | Valsetz..... | 17.00 | Gooseberry..... | .12 | | |
| Pennsylvania..... | 29.9 | +1.5 | Phoenixville..... | 75 | 24 | 2 stations..... | -27 | 15 | 1.71 | -1.11 | Warren..... | 3.33 | Lawrenceville..... | .49 | | |
| South Carolina..... | 48.8 | +1.4 | 2 stations..... | 82 | 23 | Caesars Head..... | 0 | 15 | 1.58 | -2.60 | Caesars Head..... | 4.13 | Charleston Airport..... | .56 | | |
| South Dakota..... | 26.8 | +7.6 | Fairfax..... | 78 | 19 | 2 stations..... | -23 | 14 | .46 | -10 | Andover..... | 2.18 | Gann Valley..... | .00 | | |
| Tennessee..... | 43.2 | +2.1 | Tri-City Airport..... | 79 | 23 | Gatlinburg..... | -1 | 15 | 2.65 | -1.69 | Dandridge..... | 5.00 | Memphis..... | .72 | | |
| Texas..... | 54.8 | +3.5 | Laredo..... | 95 | 23 | 2 stations..... | 5 | 10 | .51 | -1.27 | Columbus..... | 3.70 | 34 stations..... | .00 | | |
| Utah..... | 32.1 | +2.2 | St. George..... | 73 | 19 | Woodruff..... | -26 | 1 | 1.24 | -0.06 | Timpanogoo Summit..... | 6.62 | Castle Dale..... | .00 | | |
| Virginia..... | 39.5 | +2.3 | Saluda..... | 79 | 11 | Big Meadows..... | -8 | 15 | 1.85 | -1.19 | Onley..... | 4.01 | Staunton..... | .48 | | |
| Washington..... | 36.7 | +2.4 | 3 stations..... | 69 | 17 | Stockdill Ranch..... | -10 | 9 | 3.12 | -72 | Higley Peak..... | 14.42 | Rock Island..... | .03 | | |
| West Virginia..... | 34.6 | +1.3 | Hinton..... | 76 | 23 | Kumbrabow State Forest..... | -13 | 16 | 1.80 | -1.20 | Kumbrabow State Forest..... | 4.65 | McNeill..... | .29 | | |
| Wisconsin..... | 18.7 | +1.6 | Brule Island..... | 58 | 19 | Long Lake..... | -36 | 15 | .57 | -61 | Shawano..... | 2.25 | Hatfield..... | .17 | | |
| Wyoming..... | 27.9 | +5.7 | Torrington..... | 77 | 21 | Jackson..... | -30 | 1 | .54 | -23 | Grassy Lake Dam..... | 4.88 | Shawnee..... | .00 | | |
| Alaska [January]..... | -4.1 | -6.5 | Biorka Island..... | 55 | 31 | Allakaket..... | -64 | 11 | 2.32 | +1.15 | Little Port Walter..... | 23.58 | Hughes..... | .05 | | |
| Hawaii..... | 69.4 | +5.5 | Kaanapali..... | 88 | 17 | Volcano Observatory..... | 38 | 26 | 5.61 | -1.86 | Honomeale Mauka..... | 21.96 | 2 stations..... | .05 | | |
| Puerto Rico..... | 73.5 | +8.8 | Utua..... | 95 | 24 | Guineo Reservoir..... | 52 | 15 | 3.01 | -25 | La Mina (El Yunque)..... | 8.74 | Potala..... | .10 | | |

¹ Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS

| District and station | Elevation of instruments | | | Pressure | | | Temperature of the air | | | | | | | | | | Mean wet thermometer | Precipitation | | | Wind | | | | | Clear days | Partly cloudy days | Cloudy days | Average cloudiness, tenths | Total snowfall | Snow, sleet, and ice on ground at end of month | Number of days with thunderstorms | |
|------------------------|---------------------------|--------------------------|-------------------------|--------------------------------------|--|-----------------------|--------------------------|-----------------------|---------|------|--------------|---------|------|--------------|----------------------|----------------------------|----------------------|------------------------|-------|-----------------------|-----------------------------|-------------------------|----------------------|------------------|-----------|------------|--------------------|-------------|----------------------------|----------------|--|-----------------------------------|------|
| | Barometer above sea level | Thermometer above ground | Anemometer above ground | Station, reduced to mean of 24 hours | Sea level, reduced to mean of 24 hours | Departure from normal | Mean max. + mean min. +2 | Departure from normal | Maximum | Date | Mean maximum | Minimum | Date | Mean minimum | Greatest daily range | Mean temperature dew-point | | Mean relative humidity | Total | Departure from normal | Days with 0.01 inch or more | Average hourly velocity | Prevailing direction | Maximum velocity | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | Miles per hour | Direction | | | | | | | | Date |
| New England | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eastport | 75 | 67 | 85 | 29.76 | | | 24.4 | +2.9 | 48 | 11 | 33 | -19 | 16 | 16 | 27 | | 18 | 74 | 3.50 | -0.2 | 14 | 12.1 | w. | 34 | se. | 14 | 11 | 5 | 12 | 5.8 | 27.2 | 3.0 | 0 |
| Greenville, Maine | 1,070 | 6 | 41 | 28.63 | | | 15.8 | +2.5 | 48 | 23 | 27 | -35 | 16 | 5 | 39 | | 19 | 76 | 2.67 | 0 | 12 | 12 | nw. | 33 | s. | 28 | 13 | 3 | 9 | 16 | 16.6 | 18.0 | 0 |
| Portland, Maine | 103 | 5 | 36 | 29.75 | | | 22.9 | --- | 56 | 20 | 34 | -39 | 16 | 12 | 46 | | 14 | 72 | 2.81 | -1.2 | 9 | 9.2 | w. | 33 | s. | 28 | 13 | 3 | 9 | 16 | 16.6 | 18.0 | 0 |
| Concord | 289 | 4 | 45 | 29.57 | | | 22.6 | --- | 58 | 23 | 34 | -37 | 16 | 11 | 50 | | 14 | 71 | 1.57 | -1.3 | 10 | 7.6 | nw. | 23 | nw. | 9 | 9 | 9 | 10 | 5.8 | 8.8 | 2.2 | 0 |
| Burlington | 403 | 11 | 48 | 29.42 | | | 20.6 | +1.2 | 50 | 23 | 29 | -26 | 16 | 12 | 37 | | 14 | 72 | 1.11 | -0.5 | 12 | 12.0 | s. | 34 | s. | 28 | 2 | 5 | 21 | 7.9 | 9.7 | T | 0 |
| Northfield | 876 | 12 | 60 | 28.90 | | | 18.2 | +1.8 | 55 | 23 | 30 | -39 | 16 | 7 | 46 | | 14 | 71 | 1.70 | -0.6 | 16 | 8.1 | sw. | 27 | s. | 10 | 4 | 7 | 17 | 7.3 | 20.5 | 6.2 | 0 |
| Boston | 124 | 33 | 62 | 29.77 | | | 30.6 | --- | 63 | 23 | 39 | -14 | 15 | 22 | 28 | | 21 | 72 | 1.23 | -2.1 | 10 | 13.6 | w. | 40 | sw. | 28 | 8 | 9 | 11 | 5.5 | 4.5 | T | 0 |
| Nantucket | 12 | 10 | 63 | 29.91 | | | 31.2 | +1.5 | 53 | 22 | 38 | -5 | 15 | 25 | 26 | | 25 | 68 | 3.76 | -4 | 12 | 13.1 | sw. | 35 | ne. | 27 | 10 | 9 | 9 | 5.4 | 12.5 | 2.0 | 0 |
| Block Island | 26 | 11 | 46 | 29.91 | | | 31.6 | +1.2 | 53 | 21 | 38 | -6 | 15 | 25 | 24 | | 23 | 84 | 1.95 | -1.7 | 11 | 19.6 | sw. | 50 | nw. | 15 | 19 | 8 | 7 | 3.5 | 1.1 | 0 | 0 |
| Providence | 159 | 46 | 60 | 29.76 | | | 31.4 | +2.4 | 60 | 20 | 40 | -14 | 15 | 23 | 29 | | 20 | 72 | 1.61 | -2.0 | 8 | 10.6 | nw. | 40 | sw. | 28 | 11 | 7 | 10 | 5.1 | 3.2 | 0 | 0 |
| Hartford | 159 | 5 | 44 | 29.76 | | | 27.9 | --- | 60 | 23 | 37 | -24 | 16 | 19 | 42 | | 20 | 69 | 2.02 | -1.8 | 11 | 9.6 | n. | 35 | sw. | 28 | 9 | 11 | 8 | 5.4 | 8.5 | 0 | 0 |
| New Haven | 107 | 74 | 153 | 29.84 | | | 31.1 | +2.1 | 57 | 21 | 39 | -9 | 15 | 24 | 30 | | 22 | 75 | 2.42 | -1.6 | 10 | 9.3 | s. | 27 | sw. | 28 | 9 | 10 | 9 | 5.1 | 2.4 | 0 | 0 |
| Middle Atlantic States | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Albany | 97 | 26 | 40 | 29.82 | | | 24.0 | +2.6 | 56 | 23 | 33 | -22 | 15 | 13 | 34 | | 16 | 73 | 1.06 | -1.5 | 12 | 11.7 | s. | 39 | w. | 8 | 4 | 11 | 13 | 6.8 | 5.1 | 0 | 0 |
| Binghamton | 871 | 57 | 79 | 28.98 | | | 26.8 | +2.8 | 63 | 23 | 36 | -14 | 15 | 17 | 35 | | 19 | 73 | 1.55 | -0.7 | 12 | 7.4 | w. | 22 | w. | 1 | 11 | 7 | 10 | 5.4 | 8.4 | 1.1 | 0 |
| New York | 314 | 415 | 454 | 29.62 | | | 34.1 | +2.8 | 61 | 24 | 42 | -8 | 15 | 26 | 29 | | 21 | 81 | 1.67 | -2.2 | 10 | 18.6 | nw. | 64 | nw. | 8 | 12 | 9 | 7 | 4.7 | 3.9 | 0 | 0 |
| Harrisburg | 374 | 30 | 49 | 29.62 | | | 33.5 | +3.3 | 70 | 23 | 42 | -2 | 15 | 25 | 35 | | 22 | 61 | 1.42 | -1.5 | 7 | 9.1 | w. | 26 | nw. | 1 | 7 | 9 | 12 | 4.6 | 0 | 0 | 0 |
| Philadelphia | 114 | 174 | 367 | 29.87 | | | 34.1 | +2.2 | 67 | 23 | 43 | 3 | 15 | 25 | 37 | | 24 | 67 | 1.89 | -1.4 | 10 | 10.4 | nw. | 37 | nw. | 14 | 4 | 14 | 10 | 5.9 | 1.0 | 0 | 0 |
| Reading | 323 | 47 | 306 | 29.63 | | | 33.6 | +3.1 | 68 | 23 | 42 | 0 | 15 | 26 | 35 | | 24 | 71 | 1.73 | -1.7 | 9 | 13.4 | w. | 44 | e. | 6 | 10 | 6 | 12 | 6.1 | 8.0 | T | 0 |
| Seranton | 805 | 72 | 104 | 29.07 | | | 28.4 | +1.1 | 63 | 23 | 37 | -13 | 15 | 20 | 31 | | 25 | 68 | 2.32 | -2.2 | 10 | 8.1 | sw. | 25 | nw. | 8 | 5 | 12 | 11 | 6.1 | 5.0 | T | 0 |
| Atlantic City | 52 | 37 | 172 | 29.94 | | | 36.0 | +2.4 | 66 | 19 | 43 | -6 | 15 | 20 | 29 | | 25 | 68 | 2.32 | -2.0 | 8 | 17.3 | w. | 45 | s. | 11 | 12 | 8 | 8 | 5.2 | 1.3 | 0 | 0 |
| Trenton | 190 | 89 | 107 | 29.78 | | | 33.8 | +3.1 | 68 | 23 | 42 | -2 | 15 | 26 | 34 | | 22 | 63 | 1.28 | -1.0 | 6 | 10.3 | nw. | 31 | s. | 28 | 8 | 13 | 7 | 5.2 | 1.2 | 0 | 0 |
| Baltimore | 123 | 100 | 215 | 29.88 | | | 38.5 | +3.4 | 70 | 20 | 47 | -6 | 15 | 31 | 33 | | 24 | 63 | 2.08 | -1.3 | 7 | 11.1 | sw. | 34 | sw. | 7 | 11 | 7 | 10 | 5.2 | 2.1 | 0 | 0 |
| Washington | 112 | 56 | 100 | 29.90 | | | 38.8 | +3.5 | 71 | 23 | 48 | -6 | 15 | 30 | 35 | | 25 | 62 | 2.02 | -1.2 | 9 | 8.6 | s. | 27 | nw. | 27 | 8 | 10 | 10 | 5.6 | 7 | 0 | 3 |
| Cape Henry | 18 | 8 | 54 | 30.02 | | | 43.0 | +1.8 | 76 | 24 | 52 | 14 | 15 | 34 | 33 | | 30 | 65 | 1.56 | -1.7 | 6 | 13.3 | sw. | 45 | nw. | 27 | 12 | 6 | 10 | 5.6 | 0 | 0 | 0 |
| Lynchburg | 686 | 144 | 184 | 29.30 | | | 41.4 | +1.1 | 74 | 23 | 52 | 8 | 15 | 31 | 38 | | 26 | 60 | 2.04 | -1.1 | 9 | 8.9 | w. | 34 | nw. | 8 | 12 | 6 | 10 | 4.9 | 0 | 0 | 0 |
| Norfolk | 91 | 80 | 125 | 29.96 | | | 44.6 | +1.9 | 75 | 24 | 54 | 13 | 15 | 35 | 35 | | 26 | 70 | 1.81 | -1.4 | 9 | 11.2 | sw. | 39 | w. | 13 | 10 | 7 | 11 | 5.2 | 2 | 0 | 0 |
| Richmond | 144 | 11 | 52 | 29.87 | | | 42.2 | +2.6 | 74 | 24 | 53 | 9 | 15 | 31 | 41 | | 26 | 58 | 1.93 | -1.2 | 8 | 9.8 | sw. | 29 | nw. | 26 | 10 | 9 | 9 | 5.1 | T | 0 | 2 |
| South Atlantic States | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asheville | 2,253 | 89 | 101 | 27.69 | | | 40.0 | +1.5 | 70 | 10 | 62 | 5 | 15 | 28 | 36 | | 27 | 66 | 2.12 | -1.0 | 8 | 9.5 | nw. | 30 | nw. | 6 | 12 | 8 | 8 | 4.8 | 2.2 | 0 | 0 |
| Charlotte | 779 | 63 | 86 | 29.24 | | | 46.8 | +2.9 | 77 | 24 | 55 | 12 | 15 | 36 | 35 | | 30 | 61 | 1.23 | -3.0 | 4 | 9.2 | sw. | 31 | sw. | 6 | 11 | 10 | 7 | 4.4 | T | 0 | 1 |
| Greensboro | 886 | 6 | 56 | 29.12 | | | 42.2 | --- | 75 | 24 | 55 | 6 | 15 | 20 | 40 | | 28 | 66 | 2.48 | --- | 4 | 9.6 | sw. | 30 | sw. | 26 | 12 | 6 | 10 | 5.0 | T | 0 | 0 |
| Hatteras | 11 | 6 | 50 | 30.07 | | | 46.8 | +2.9 | 77 | 24 | 54 | 19 | 15 | 39 | 28 | | 30 | 79 | 1.30 | -2.7 | 6 | 14.6 | sw. | 43 | nw. | 27 | 11 | 10 | 7 | 4.8 | 0 | 0 | 0 |
| Raleigh | 376 | 27 | 69 | 29.67 | | | 45.4 | +3.2 | 75 | 24 | 57 | 12 | 15 | 34 | 34 | | 28 | 56 | 1.25 | -2.7 | 4 | 11.3 | sw. | 42 | nw. | 13 | 12 | 7 | 9 | 4.5 | T | 0 | 0 |
| Wilmington | 72 | 73 | 107 | 30.03 | | | 49.2 | +1.3 | 74 | 24 | 59 | 16 | 15 | 39 | 31 | | 37 | 70 | 1.69 | -2.6 | 3 | 10.5 | sw. | 38 | sw. | 11 | 16 | 5 | 7 | 3.8 | 0 | 0 | 0 |
| Charleston | 48 | 11 | 92 | 30.08 | | | 50.9 | +1.5 | 75 | 24 | 60 | 18 | 15 | 42 | 27 | | 38 | 72 | 1.64 | -2.3 | 3 | 10.7 | sw. | 30 | nw. | 26 | 17 | 6 | 5 | 3.5 | 0 | 0 | 0 |
| Columbia, S. C. | 347 | 70 | 91 | 29.72 | | | 49.8 | +1.6 | 78 | 24 | 61 | 18 | 15 | 39 | 31 | | 38 | 73 | 1.90 | -2.9 | 6 | 10.7 | sw. | 30 | sw. | 6 | 13 | 8 | 7 | 4.3 | 0 | 0 | 0 |
| Greenville, S. C. | 1,040 | 70 | 78 | 28.97 | | | 45.6 | +2.3 | 75 | 24 | 57 | 17 | 15 | 34 | 34 | | 29 | 61 | 2.50 | -2.7 | 6 | 10.2 | sw. | 33 | w. | 6 | 11 | 9 | 8 | 4.4 | 0 | 0 | 1 |
| Augusta | 182 | 62 | 77 | 29.92 | | | 50.8 | +2.3 | 75 | 24 | 63 | 18 | 15 | 39 | 36 | | 33 | 56 | 1.11 | -3.0 | 3 | 7.0 | nw. | 26 | w. | 6 | 10 | 13 | 5 | 4.1 | 0 | 0 | 0 |
| Savannah | 65 | 73 | 152 | 30.07 | | | 54.1 | +1.1 | 81 | 25 | 65 | 21 | 15 | 43 | 36 | | 37 | 65 | 1.69 | -2.4 | 3 | 11.8 | nw. | 35 | nw. | 14 | 16 | 8 | 4 | 3.2 | 0 | 0 | 0 |
| Jacksonville | 43 | 86 | 110 | 30.12 | | | 56.2 | +1.8 | 82 | 25 | 67 | 23 | 15 | 45 | 34 | | 40 | 69 | 1.52 | -2.4 | 2 | 7.8 | nw. | 27 | w. | 13 | 17 | 9 | 2 | 3.0 | 0 | 0 | 0 |
| Florida Peninsula | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Key West | 21 | 10 | 64 | 30.11 | | | 68.8 | -1.7 | 84 | 6 | 74 | 54 | 15 | 64 | 20 | | 56 | 71 | 1.49 | -8 | 3 | 10.8 | ne. | 31 | nw. | 14 | 22 | 5 | 1 | 2.1 | 0 | 0 | 1 |
| Miami | 25 | 124 | 168 | 30.11 | | | 64.4 | -2.7 | 83 | 6 | 72 | 36 | 16 | 57 | 27 | | 52 | 77 | 1.94 | -9 | 3 | 13.4 | n. | 30 | nw. | 7 | 19 | 6 | 3 | 3.0 | 0 | 0 | 0 |
| Tampa | 35 | 5 | 61 | 30.13 | | | 59.8 | -2.1 | 79 | 3 | 70 | 31 | 15 | 50 | 31 | | 48 | 75 | 1.24 | -1.3 | 4 | 9.8 | n. | 26 | sw. | 6 | 20 | 6 | 2 | 2.4 | 0 | 0 | 0 |
| East Gulf States | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atlanta | 1,173 | 5 | 72 | 28.88 | | | 46.8 | +1.5 | 74 | 24 | 57 | 13 | 15 | 36 | 33 | | 31 | 59 | 1.09 | -4.1 | 6 | 11.3 | nw. | 37 | nw. | 26 | 13 | 7 | 8 | 4.3 | T | 0 | 2 |
| Macon | 370 | 79 | 87 | 29.74 | | | 49.8 | +1.5 | 78 | 24 | 62 | 16 | 15 | 37 | 38 | | 33 | 61 | 1.10 | -3.3 | 4 | 7.7 | nw. | 26 | nw. | 26 | 16 | 7 | 5 | 3.3 | 0 | 0 | 3 |
| Thomasville | 273 | 49 | 58 | 29.89 | | | 55.0 | --- | 78 | 23 | 69 | 20 | 15 | 41 | 39 | | 34 | 62 | 1.35 | -3.1 | 4 | 7.5 | sw. | 30 | n. | 5 | 11 | 6 | 11 | 5.5 | 7 | 0 | 0 |
| Apalachicola | 35 | 11 | 51 | 30.13 | | | 55.2 | -1.1 | 74 | 25 | 64 | 25 | 15 | 47 | 25 | | 44 | 74 | 2.79 | -1.0 | 6 | 8.5 | nw. | 24 | nw. | 11 | 17 | 9 | 2 | 2.8 | 0 | 0 | 1 |
| Pensacola | 56 | 54 | 79 | 30.11 | | | 55.2 | --- | 75 | 4 | | | | | | | | | | | | | | | | | | | | | | | |

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

| District and station | Elevation of instruments | | | Pressure | | | Temperature of the air | | | | | | | | | | Precipitation | | Wind | | | | Partly cloudy days | Cloudy days | Average cloudiness, tenths | Total snowfall | Snow, sleet, and ice on ground at end of month | Number of days with thunderstorms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---------------------------|--------------------------|-------------------------|--------------------------------------|--|-----------------------|------------------------|-----------------------|---------|------|--------------|---------|------|--------------|----------------------|----------------------|-----------------------------------|------------------------|-------|-----------------------|------------------------------|-------------------------|--------------------|-------------|----------------------------|----------------|--|-----------------------------------|----------------------|------------------|-----------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
| | Barometer above sea level | Thermometer above ground | Anemometer above ground | Station, reduced to mean of 24 hours | Sea level, reduced to mean of 24 hours | Departure from normal | Mean max. + min. +2 | Departure from normal | Maximum | Date | Mean maximum | Minimum | Date | Mean minimum | Greatest daily range | Mean wet thermometer | Mean temperature of the dew point | Mean relative humidity | Total | Departure from normal | Days with 0.01 inch, or more | Average hourly velocity | | | | | | | Prevailing direction | Maximum velocity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Miles per hour | Direction | Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ohio Valley and Tennessee | Fl. | Fl. | Fl. | In. | In. | In. | °F. | °F. | °F. | °F. | °F. | °F. | °F. | °F. | °F. | °F. | °F. | % | In. | In. | Miles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | </ |

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

| District and station | Elevation of instruments | | | Pressure | | | Temperature of the air | | | | | | | | | | Precipitation | | | Wind | | | | | Average cloudiness, tenths | Total snowfall | Snow, sleet, and ice on ground at end of month | Number of days with thunderstorms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---------------------------|--------------------------|-------------------------|--------------------------------------|--|-----------------------|--------------------------|-----------------------|---------|------|--------------|---------|------|--------------|----------------------|----------------------|-----------------------------------|------------------------|-------|-----------------------|------------------------------|-------------------------|----------------------|------------------|----------------------------|----------------|--|-----------------------------------|-----------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | Barometer above sea level | Thermometer above ground | Anemometer above ground | Station, reduced to mean of 24 hours | Sea level, reduced to mean of 24 hours | Departure from normal | Mean max. + mean min. +2 | Departure from normal | Maximum | Date | Mean maximum | Minimum | Date | Mean minimum | Greatest daily range | Mean wet thermometer | Mean temperature of the dew-point | Mean relative humidity | Total | Departure from normal | Days with 0.01 inch. or more | Average hourly velocity | Prevailing direction | Maximum velocity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | Miles per hour | | | | | Direction | Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Middle Slope | Ft. | Ft. | Ft. | In. | In. | In. | °F. | °F. | °F | °F. | °F. | °F. | °F. | °F. | °F | °F. | °F. | % 55 | In. | In. | | Mile. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SEVERE LOCAL STORMS, FEBRUARY 1943

[Compiled by Mary O. Souder]

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

| Place | Date | Time | Width of path, yards | Loss of life | Value of property destroyed | Character of storm | Remarks |
|--|-------|------------------|----------------------|--------------|-----------------------------|----------------------------------|--|
| Minnesota, extreme south-western counties. | 9-10 | | | | \$5,000 | Glaze, sleet, snow, and wind. | Many wires down. Ice remained on wires in some localities for 48 hours, the heaviest ice formation being in the vicinities of Lakes Benton and Hendricks, near the South Dakota border. Highways and roads blocked by snow drifts and trains into Minneapolis 7 hours late. In Minneapolis and St. Paul hundreds of accidents occurred because of icy walks and streets, with many motor accidents reported. |
| South Dakota, northeastern portion. | 10 | All day | | | 20,000 | High wind and snow | Light to moderate snow, accompanied by lower temperatures and high winds slowed transportation, causing interruption of business, with damage to telephone company alone, \$20,000. |
| Perkins County, S. Dak. | 19-22 | | | | 100,000 | Flood | Both forks of Grand River, especially near Shadehill area, flooded after week end of unseasonable warmth, in which ice broke and jammed causing damage to farms, farm machinery, buildings and highway bridges, and killed considerable stock. |
| Washington, D. C., and vicinity. | 26 | 8:44-10:07 p. m. | | | | Snow with thunder and lightning. | This storm considered unusual, the kind one might see once or twice in a lifetime. |

LATE STORM REPORT FOR JANUARY 1943

| | | | | | | | |
|-----------------------|-------|--|--|--|----------|------|---|
| Utah, western portion | 20-23 | | | | \$42,310 | Wind | Damage mostly structural and centered in portions of western Salt Lake and eastern Tooele Counties. |
|-----------------------|-------|--|--|--|----------|------|---|

SOLAR RADIATION AND SUNSPOT DATA FOR FEBRUARY 1943

[Solar Radiation Investigations Section, I. F. HAND in charge]

SOLAR RADIATION OBSERVATIONS

Explanations of the tables and references to descriptions of instruments, stations and methods of observation, and to summaries of data, are given in the January 1942 REVIEW, page 20; a list of pyrheliometric stations is also given in the REVIEW for January 1943, page 12.

TABLE 1.—Solar radiation intensities during February 1943

[Gram-calories per minute per square centimeter of normal surface]

MADISON, WIS.

| Date | Sun's zenith distance | | | | | | | | | | Local mean solar time |
|------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|
| | 7:30 a. m. | 78.7° | 75.7° | 70.7° | 60.0° | 0.0° | 60.0° | 70.7° | 75.7° | 78.7° | 1:30 p. m. |
| | Air mass | | | | | | | | | | |
| | A. M. | | | | | P. M. | | | | | |
| | e. | 5.0 | 4.0 | 3.0 | 2.0 | *1.0 | 2.0 | 3.0 | 4.0 | 5.0 | e. |
| Feb. 1 | mm. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | mm. |
| 2 | 0.86 | 0.72 | 0.88 | 0.99 | 1.58 | 1.52 | 1.14 | 1.24 | 1.39 | 1.41 | 1.24 |
| 3 | 1.37 | .61 | .84 | 1.02 | 1.25 | 1.52 | 1.14 | 1.24 | 1.39 | 1.41 | 2.26 |
| 4 | 3.81 | | | | 1.34 | | | | | | 5.18 |
| 5 | 1.37 | | .76 | 1.01 | 1.30 | 1.59 | 1.26 | | | | 2.74 |
| 6 | 2.74 | | .33 | .42 | .61 | | | | | | 3.63 |
| 7 | .69 | .68 | .87 | 1.07 | 1.18 | 1.48 | 1.34 | | | | .96 |
| 8 | 1.60 | .76 | .90 | 1.07 | 1.30 | | | | | | 2.06 |
| 9 | 1.85 | .50 | .71 | .83 | 1.04 | 1.30 | 1.04 | | | | 3.30 |
| 10 | 4.37 | .49 | .59 | .73 | .92 | 1.19 | .84 | | | | 5.82 |
| 11 | 4.98 | | | .92 | 1.11 | | | | | | 4.78 |
| 12 | 4.37 | | | 1.01 | 1.21 | 1.50 | | | | | 4.98 |
| 13 | 3.15 | | | | 1.37 | | | | | | 2.49 |
| Means | | .63 | .74 | .91 | 1.15 | 1.45 | 1.12 | 1.14 | | | |
| Departures | | -.27 | -.30 | -.26 | -.20 | -.10 | -.20 | -.03 | | | |

LINCOLN, NEBR.

| | | | | | | | | | | | |
|--------|------|------|------|------|------|--|------|------|------|------|------|
| Feb. 1 | 1.60 | | | | | | 1.24 | 1.11 | 0.99 | 0.88 | 3.15 |
| 2 | 2.36 | 0.83 | 0.98 | 1.11 | 1.20 | | | | | | 3.63 |
| 4 | 3.63 | .92 | 1.05 | 1.16 | 1.34 | | 1.36 | 1.18 | | | 3.81 |

*Extrapolated.

TABLE 1.—Solar radiation intensities during February 1943—Con.

LINCOLN, NEBR.—Continued

| Date | Sun's zenith distance | | | | | | | | | | Local mean solar time |
|------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|
| | 7:30 a. m. | 78.7° | 75.7° | 70.7° | 60.0° | 0.0° | 60.0° | 70.7° | 75.7° | 78.7° | 1:30 p. m. |
| | Air mass | | | | | | | | | | |
| | A. M. | | | | | P. M. | | | | | |
| | e. | 5.0 | 4.0 | 3.0 | 2.0 | *1.0 | 2.0 | 3.0 | 4.0 | 5.0 | e. |
| 6 | mm. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | mm. |
| 7 | 3.15 | .99 | 1.11 | 1.24 | 1.39 | 1.41 | 1.22 | 1.36 | 1.20 | 1.07 | 3.48 |
| 8 | 3.63 | | | | | | | | | | 5.38 |
| 9 | 3.81 | .73 | .83 | .99 | 1.22 | | | .94 | .75 | .66 | 5.38 |
| 10 | 1.60 | .94 | 1.07 | 1.20 | 1.34 | | | | | | 2.74 |
| 11 | 3.30 | .83 | .94 | 1.05 | 1.27 | 1.20 | 1.01 | .90 | .73 | .30 | 3.30 |
| 12 | 2.87 | .60 | .70 | .94 | 1.18 | 1.18 | 1.01 | .88 | .73 | .478 | 4.78 |
| 13 | 4.78 | .35 | .49 | .68 | .94 | | | | | | 6.55 |
| 14 | 4.19 | | | | 1.27 | 1.34 | | | | | 4.78 |
| 15 | 3.30 | | | | | 1.31 | 1.16 | .98 | | | 4.57 |
| 16 | 3.30 | .87 | 1.00 | 1.11 | 1.29 | | | | | | 3.99 |
| 17 | 1.52 | 1.02 | 1.13 | 1.24 | 1.40 | 1.34 | 1.16 | 1.03 | .92 | 2.06 | 2.06 |
| 18 | 3.15 | .94 | 1.05 | 1.16 | 1.31 | 1.24 | 1.09 | .96 | .88 | 3.63 | 3.63 |
| Means | | .82 | .94 | 1.08 | 1.26 | 1.30 | 1.11 | .94 | .80 | | |
| Departures | | -.09 | -.08 | -.08 | -.10 | -.05 | -.11 | -.07 | -.12 | | |

BLUE HILL, MASS.

| | | | | | | | | | | | |
|------------|-----|------|------|------|------|------|------|------|------|-----|-----|
| Feb. 1 | 6.0 | | | | | | | | | | 4.8 |
| 2 | 2.6 | 0.86 | 0.95 | 1.07 | 1.26 | 1.22 | 1.02 | .83 | .65 | | 2.6 |
| 3 | 1.8 | .99 | 1.11 | 1.24 | | | | | | | 2.4 |
| 4 | 6.3 | .79 | .92 | | | | | | | | 4.2 |
| 5 | 2.6 | | | | 1.33 | 1.31 | 1.06 | | | | 2.2 |
| 6 | 2.9 | | | | | 1.19 | 1.01 | | | | 2.0 |
| 7 | .2 | | | | | 1.41 | 1.29 | 1.19 | 1.09 | .3 | .3 |
| 8 | .4 | 1.01 | 1.12 | 1.24 | 1.40 | 1.31 | 1.10 | .96 | .84 | .6 | .6 |
| 9 | 1.6 | .86 | .99 | 1.11 | 1.33 | | 1.14 | 1.01 | .88 | 2.0 | 2.0 |
| 10 | 4.8 | .56 | .69 | .83 | .97 | | | | | | 7.1 |
| 11 | 2.6 | .95 | 1.04 | 1.18 | 1.36 | | | | | | 2.6 |
| Means | | .86 | .97 | 1.11 | 1.26 | 1.29 | 1.10 | .98 | .83 | | |
| Departures | | -.07 | -.06 | .00 | -.04 | +.01 | -.05 | -.04 | -.09 | | |

TABLE 2.—Daily totals and weekly means of solar radiation (direct+diffuse) received on a horizontal surface

(Gram-calories per square centimeter)

| Date | Wash- ington | Mad- ison | Lin- coln | East Lans- ing | New York | Colum- bus | Fair- banks | Nash- ville | Twin Falls | New Or- leans | River- side | Blue Hill | Ithaca | New- port | State College | Put-in- Bay | East Ware- ham | Davis, Calif |
|-----------|-----------------|--------------|--------------|----------------------|-------------|---------------|----------------|----------------|---------------|---------------------|----------------|--------------|--------|--------------|------------------|----------------|----------------------|-----------------|
| 1943 | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. | cal. |
| Jan. 29 | 101 | 34 | 80 | 159 | 217 | 101 | 14 | 77 | 111 | 212 | 176 | 143 | 183 | 135 | 198 | 130 | 77 | 41 |
| 30 | 73 | 139 | 203 | 106 | 31 | 22 | 74 | 127 | 501 | 191 | 98 | 94 | 150 | 91 | 45 | 158 | 138 | |
| 31 | 146 | 72 | 310 | 103 | 287 | 44 | 6 | 261 | 295 | 481 | 220 | 192 | 145 | 240 | 181 | 50 | 140 | 352 |
| Feb. 1 | 335 | 271 | 268 | 194 | 251 | 4 | 310 | 283 | 498 | 359 | 106 | 245 | 143 | 205 | 194 | 90 | 128 | |
| 2 | 300 | 271 | 235 | 250 | 241 | 283 | 7 | 316 | 121 | 275 | 211 | 293 | 188 | 307 | 163 | 195 | 291 | 95 |
| 3 | 150 | 42 | 241 | 40 | 182 | 50 | 11 | 50 | 271 | 235 | 306 | 242 | 299 | 127 | 32 | 304 | 211 | |
| 4 | 32 | 227 | 295 | 126 | 20 | 224 | 43 | 172 | 79 | 508 | 343 | 34 | 90 | 26 | 123 | 204 | 29 | 72 |
| Mean | 162 | 151 | 233 | 140 | 176 | 140 | 15 | 180 | 184 | 412 | 248 | 168 | 170 | 191 | 155 | 122 | 156 | 148 |
| Departure | -40 | -32 | +19 | ----- | +6 | ----- | -25 | +8 | -7 | +157 | +9 | -44 | +6 | -17 | +49 | ----- | ----- | ----- |
| 5 | 142 | 169 | 176 | 272 | 250 | 262 | 55 | 56 | 202 | 493 | 346 | 285 | 296 | 266 | 250 | 315 | 288 | 217 |
| 6 | 69 | 223 | 318 | 44 | 27 | 51 | 74 | 323 | 217 | 485 | 365 | 35 | 21 | 33 | 16 | 39 | 44 | 344 |
| 7 | 151 | 304 | 310 | 109 | 128 | 294 | 74 | 333 | 220 | 449 | 365 | 154 | 31 | 265 | 129 | 34 | 246 | 200 |
| 8 | 352 | 294 | 272 | 306 | 217 | 344 | 60 | 346 | 207 | 372 | 199 | 261 | 139 | 244 | 264 | 346 | 280 | 241 |
| 9 | 253 | 116 | 22 | 178 | 260 | 121 | 63 | 65 | 324 | 477 | 402 | 320 | 277 | 336 | 314 | 125 | 303 | 381 |
| 10 | 142 | 141 | 200 | 51 | 71 | 28 | 62 | 82 | 238 | 437 | 399 | 206 | 127 | 206 | 114 | 59 | 244 | 363 |
| 11 | 89 | 324 | 201 | 218 | 19 | 119 | 6 | 362 | 295 | 350 | 394 | 30 | 41 | 38 | 82 | 139 | 74 | 381 |
| Mean | 171 | 225 | 227 | 168 | 139 | 174 | 56 | 224 | 256 | 438 | 353 | 184 | 133 | 198 | 168 | 151 | 211 | 304 |
| Departure | -41 | +24 | -24 | ----- | -34 | ----- | -5 | +48 | +56 | +192 | +69 | -36 | -42 | -12 | +55 | ----- | ----- | ----- |
| 12 | 330 | 290 | 188 | 258 | 320 | 223 | 7 | 144 | 283 | 229 | 370 | 328 | 199 | 342 | 247 | 268 | 316 | 371 |
| 13 | 84 | 343 | 138 | 202 | 4 | 200 | 10 | 119 | 262 | 376 | 397 | 123 | 137 | 86 | 107 | 200 | 109 | 386 |
| 14 | 327 | 358 | 348 | 383 | 274 | 345 | 0 | 373 | 354 | 154 | 398 | 332 | 218 | 333 | 214 | 381 | 328 | 393 |
| 15 | 393 | 309 | 286 | 251 | 404 | 251 | 0 | 135 | 328 | ----- | 409 | 377 | 286 | 406 | 342 | 255 | 372 | 387 |
| 16 | 325 | 308 | 375 | 274 | 310 | 340 | 6 | 319 | 367 | ----- | 408 | 391 | 310 | 378 | 212 | 286 | 371 | 277 |
| 17 | 257 | 322 | 350 | 390 | 151 | 105 | 15 | 320 | 334 | 469 | 401 | 164 | 176 | 166 | 166 | 312 | 115 | 388 |
| 18 | 406 | 318 | 344 | 342 | 344 | 209 | 11 | 284 | 336 | 325 | 370 | 377 | 278 | 370 | 376 | 365 | 375 | 269 |
| Mean | 303 | 317 | 290 | 300 | 258 | 261 | 7 | 242 | 325 | 311 | 393 | 299 | 229 | 297 | 238 | 296 | 284 | 353 |
| Departure | +74 | +91 | +30 | ----- | +61 | ----- | -65 | +26 | +62 | +54 | +85 | +56 | +42 | +31 | +24 | ----- | ----- | ----- |
| 19 | 376 | 292 | 325 | 312 | 242 | 287 | 13 | 192 | 336 | 481 | 326 | 267 | 260 | 241 | 296 | 314 | 253 | 354 |
| 20 | 296 | 290 | 347 | 214 | 256 | 100 | 7 | 228 | 346 | 526 | 210 | 296 | 151 | 312 | 262 | 123 | 312 | 260 |
| 21 | 310 | 355 | 368 | 368 | 254 | ----- | 0 | 206 | 148 | 96 | 159 | 326 | 328 | 267 | 286 | 400 | 298 | 72 |
| 22 | 283 | 323 | 287 | 309 | 205 | ----- | 7 | 370 | 72 | ----- | 188 | 323 | 366 | 314 | 218 | 372 | 323 | 164 |
| 23 | 890 | 87 | 56 | 270 | 238 | 214 | 2 | 275 | 118 | ----- | 182 | 255 | 174 | 271 | 318 | 210 | 282 | 259 |
| 24 | 116 | 265 | 218 | 154 | 128 | 37 | 0 | 90 | 144 | ----- | 226 | 130 | 15 | 104 | 97 | 55 | 111 | 249 |
| 25 | 286 | 326 | 191 | 388 | 301 | 207 | 0 | 368 | 380 | ----- | 302 | 327 | 371 | 378 | 278 | 354 | 371 | 137 |
| Mean | 285 | 277 | 256 | 288 | 232 | 169 | 4 | 247 | 221 | ----- | 220 | 275 | 238 | 270 | 251 | 261 | 279 | 216 |
| Departure | +20 | +22 | -29 | ----- | +4 | ----- | -89 | +4 | -35 | ----- | -91 | +4 | +14 | +6 | +75 | ----- | ----- | ----- |

ACCUMULATED DEPARTURES ON FEB. 25, 1943

| | | | | | | | | | | | | | | | | | | |
|------|-------|------|-------|-----|-------|-------|------|------|-------|-----|------|------|------|-------|-------|-------|-------|-------|
| -238 | +1218 | -175 | ----- | +49 | ----- | -1624 | +357 | -308 | ----- | +77 | -525 | +448 | -371 | +1015 | ----- | ----- | ----- | ----- |
|------|-------|------|-------|-----|-------|-------|------|------|-------|-----|------|------|------|-------|-------|-------|-------|-------|

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
FEBRUARY 1943

[Communicated by Capt. J. F. Hellweg, U. S. N. (Ret.), Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, area of spot or group, and spot count, are included assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups, and total spot count.

| Date | East- ern stand- ard time | Mount Wilson group No. | Heliographic | | | | Area of spot or group | Spot count | Plate qual- ity | Observatory |
|--------|---------------------------------------|---------------------------------|---|---------------------|--------------------|--|-----------------------------------|---------------|-----------------------|--------------|
| | | | Dif- fer- ence in lon- gi- tude | Lon- gi- tude | Lat- i- tude | Dis- tance from cen- ter of disk | | | | |
| 1943 | h m | | ° | ° | ° | ° | | | | |
| Feb. 1 | 11 51 | 7544 | -33 | 23 | -5 | 32 | 73 | 8 | G | U. S. Naval. |
| | | | | (56) | (-6) | ----- | 73 | 8 | | |
| 2 | 10 52 | 7544 | -21 | 23 | -5 | 21 | 73 | 10 | F | Do. |
| | | 7545 | +1 | 45 | +9 | 15 | 48 | 5 | | |
| | | | | (44) | (-6) | ----- | 121 | 15 | | |
| 3 | 11 1 | 7544 | -6 | 24 | -4 | 6 | 48 | 5 | F | Do. |
| | | 7545 | +16 | 46 | +8 | 22 | 24 | 2 | | |
| | | | | (30) | (-6) | ----- | 72 | 7 | | |
| 4 | 11 2 | 7546 | -45 | 28 | -3 | 46 | 36 | 1 | P | Mt. Wilson. |
| | | 7545 | +28 | 45 | +9 | 32 | 24 | 2 | | |
| | | | | (17) | (-6) | ----- | 60 | 3 | | |
| 5 | 11 1 | 7544 | +18 | 22 | -4 | 19 | 36 | 2 | P | Do. |
| | | | | (4) | (-6) | ----- | 36 | 2 | | |

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
FEBRUARY 1943—Continued

| Date | East- ern stand- ard time | Mount Wilson group No. | Heliographic | | | | Area of spot or group | Spot count | Plate qual- ity | Observatory |
|-------|---------------------------------------|---------------------------------|---|---------------------|--------------------|--|-----------------------------------|---------------|-----------------------|--------------|
| | | | Dif- fer- ence in lon- gi- tude | Lon- gi- tude | Lat- i- tude | Dis- tance from cen- ter of disk | | | | |
| 1943 | h m | | ° | ° | ° | ° | | | | |
| 6--- | 10 48 | 7548 | -80 | 271 | +11 | 80 | 12 | 2 | F | Mt. Wilson. |
| | | 7547 | -18 | 333 | +6 | 23 | 24 | 6 | | |
| | | 7544 | +30 | 21 | -4 | 30 | 24 | 4 | | |
| | | | | (351) | (-6) | ----- | 60 | 12 | | |
| 7--- | 11 12 | 7548 | -66 | 272 | +11 | 69 | 12 | 2 | F | Do. |
| | | | | (338) | (-6) | ----- | 12 | 2 | | |
| 8--- | 10 37 | 7551 | -45 | 280 | -3 | 46 | 97 | 6 | F | U. S. Naval. |
| | | 7544 | +61 | 26 | -4 | 61 | 24 | 3 | | |
| | | | | (325) | (-6) | ----- | 121 | 9 | | |
| 9--- | 10 40 | 7551 | -31 | 281 | -2 | 32 | 73 | 10 | VG | Do. |
| | | 7550 | -28 | 284 | +8 | 32 | 436 | 38 | | |
| | | 7549 | +39 | 351 | -4 | 40 | 12 | 1 | | |
| | | | | (312) | (-7) | ----- | 521 | 49 | | |
| 10--- | 11 45 | 7551 | -17 | 281 | -2 | 18 | 48 | 2 | G | Do. |
| | | 7550 | -17 | 281 | +7 | 23 | 485 | 20 | | |
| | | 7550 | -11 | 287 | +5 | 17 | 388 | 1 | | |
| | | | | (296) | (-7) | ----- | 921 | 23 | | |
| 11--- | 14 49 | 7550 | -2 | 281 | +7 | 16 | 436 | 15 | F | Do. |
| | | 7551 | -1 | 282 | -2 | 5 | 48 | 1 | | |
| | | 7550 | +4 | 287 | +5 | 13 | 388 | 1 | | |
| | | | | (283) | (-7) | ----- | 872 | 17 | | |

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
FEBRUARY 1943—Continued

| Date | East- ern stand- ard time | Mount Wilson group No. | Hellographic | Area of spot or group | Spot count | Plate qual- ity | Observatory |
|-------------------|---------------------------------------|---------------------------------|---|-----------------------------------|---------------|---|-------------|
| | | | Dif- ference in longi- tude | Longi- tude | Lat- itude | Dis- tance from cen- ter of disk | |
| 1943 Feb. 12.. | h m | | ° | ° | ° | ° | |
| | | 7550 | +9 | 281 | +8 | 18 | 412 |
| | | 7551 | +11 | 283 | -2 | 13 | 48 |
| | | 7550 | +16 | 288 | +5 | 20 | 428 |
| | | | | (272) | (-7) | | 908 |
| 13.. | 16 31 | 7550 | +25 | 281 | +8 | 30 | 388 |
| | | 7551 | +27 | 283 | -2 | 28 | 18 |
| | | 7550 | +32 | 288 | +5 | 33 | 388 |
| | | | | (256) | (-7) | | 794 |
| 14.. | 11 12 | 7552 | -55 | 190 | -6 | 55 | 48 |
| | | 7550 | +33 | 278 | +8 | 37 | 194 |
| | | 7550 | +38 | 283 | +7 | 41 | 97 |
| | | 7550 | +43 | 288 | +5 | 45 | 388 |
| | | | | (245) | (-7) | | 727 |
| 15.. | 10 37 | (*) | -70 | 163 | -5 | 70 | 6 |
| | | 7550 | +47 | 280 | +8 | 50 | 145 |
| | | 7550 | +51 | 284 | +7 | 53 | 194 |
| | | 7550 | +57 | 290 | +5 | 58 | 388 |
| | | 7553 | +65 | 298 | +1 | 65 | 6 |
| | | | | (233) | (-7) | | 739 |
| 16.. | 10 42 | 7550 | +58 | 277 | +8 | 60 | 97 |
| | | 7550 | +63 | 282 | +8 | 64 | 145 |
| | | 7550 | +70 | 289 | +5 | 71 | 339 |
| | | | | (219) | (-7) | | 581 |
| 17.. | 11 26 | 7554 | -71 | 135 | +9 | 72 | 6 |
| | | 7550 | +72 | 278 | +8 | 73 | 97 |
| | | 7550 | +76 | 282 | +8 | 77 | 97 |
| | | 7550 | +85 | 291 | +5 | 85 | 291 |
| | | | | (206) | (-7) | | 491 |
| 18.. | 10 54 | 7554 | -57 | 136 | +9 | 58 | 97 |
| | | | | (193) | (-7) | | 97 |
| 19.. | 10 55 | 7554 | -43 | 137 | +8 | 45 | 48 |
| | | 7554 | -39 | 141 | +8 | 41 | 48 |
| | | | | (180) | (-7) | | 96 |
| 20.. | 11 10 | 7555 | -73 | 93 | +10 | 74 | 339 |
| | | 7554 | -30 | 136 | +8 | 34 | 73 |
| | | 7554 | -27 | 139 | +9 | 32 | 48 |
| | | (*) | -20 | 146 | +9 | 26 | 12 |
| | | | | (166) | (-7) | | 472 |
| 21.. | 10 32 | 7555 | -61 | 93 | +10 | 64 | 727 |
| | | 7555 | -51 | 103 | +9 | 53 | 48 |
| | | 7554 | -18 | 136 | +9 | 24 | 24 |
| | | 7554 | -14 | 140 | +9 | 22 | 18 |
| | | 7556 | +3 | 157 | +6 | 13 | 48 |
| | | | | (154) | (-7) | | 865 |
| 22.. | 10 53 | 7555 | -46 | 94 | +10 | 49 | 776 |
| | | 7555 | -37 | 103 | +10 | 41 | 97 |
| | | 7554 | -2 | 138 | +8 | 15 | 48 |
| | | 7556 | +17 | 157 | +6 | 22 | 73 |
| | | | | (140) | (-7) | | 994 |
| 23.. | 10 49 | 7555 | -35 | 92 | +10 | 39 | 339 |
| | | 7555 | -28 | 99 | +10 | 33 | 485 |
| | | 7555 | -23 | 104 | +9 | 28 | 73 |
| | | 7556 | +31 | 158 | +7 | 35 | 97 |
| | | | | (127) | (-7) | | 994 |
| 24.. | 10 58 | 7555 | -22 | 92 | +10 | 27 | 339 |
| | | 7555 | -14 | 100 | +9 | 22 | 436 |
| | | 7555 | -9 | 105 | +9 | 18 | 73 |
| | | 7556 | +45 | 159 | +8 | 48 | 242 |
| | | | | (114) | (-7) | | 1090 |
| 25.. | 11 31 | 7558 | -56 | 44 | -14 | 56 | 12 |
| | | 7555 | -8 | 92 | +11 | 20 | 339 |
| | | 7555 | 0 | 100 | +10 | 18 | 436 |
| | | 7555 | +4 | 104 | +9 | 17 | 48 |
| | | 7557 | +13 | 113 | +7 | 21 | 48 |
| | | 7556 | +59 | 159 | +8 | 61 | 242 |
| | | | | (100) | (-7) | | 1125 |
| 26.. | 10 58 | 7555 | +7 | 94 | +11 | 20 | 339 |
| | | 7555 | +14 | 101 | +10 | 23 | 921 |
| | | 7557 | +27 | 114 | +7 | 30 | 48 |
| | | 7556 | +72 | 159 | +6 | 73 | 48 |
| | | 7556 | +78 | 165 | +8 | 79 | 194 |
| | | | | (87) | (-7) | | 1550 |
| 27.. | 10 34 | 7555 | +20 | 95 | +11 | 27 | 388 |
| | | 7555 | +27 | 102 | +11 | 32 | 1115 |
| | | 7557 | +41 | 116 | +7 | 44 | 48 |
| | | | | (75) | (-7) | | 1561 |

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
FEBRUARY 1943—Continued

| Date | East- ern stand- ard time | Mount Wilson group No. | Hellographic | Area of spot or group | Spot count | Plate qual- ity | Observatory |
|-------------------|---------------------------------------|---------------------------------|---|-----------------------------------|---------------|---|-------------|
| | | | Dif- ference in longi- tude | Longi- tude | Lat- itude | Dis- tance from cen- ter of disk | |
| 1943 Feb. 28.. | h m | | ° | ° | ° | ° | |
| | | (*) | +12 | 73 | -7 | 12 | 12 |
| | | 7555 | +34 | 95 | +11 | 38 | 436 |
| | | 7555 | +41 | 102 | +11 | 45 | 1115 |
| | | 7557 | +56 | 117 | +7 | 58 | 48 |
| | | | | (61) | (-7) | | 1611 |

Mean daily area for 28 days = 627

(*) Not numbered.

VG = very good; G = good; F = fair; P = poor.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR
NOVEMBER 1942

[Based on observations at Zurich, except those at Locarno as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Eidgen. Sternwarte, Zurich, Switzerland]

| November 1942 | Relative numbers | November 1942 | Relative numbers | November 1942 | Relative numbers |
|---------------|---------------------|------------------|---------------------|------------------|---------------------|
| 1..... | 54 | 11..... | a 22 | 21..... | *Ecd 33 |
| 2..... | ab 61 | 12..... | 21 | 22..... | 31 |
| 3..... | 49 | 13..... | *26 | 23..... | d 48 |
| 4..... | 40 | 14..... | *28 | 24..... | a 39 |
| 5..... | 28 | 15..... | *23 | 25..... | 37 |
| 6..... | *36 | 16..... | 8 | 26..... | *41 |
| 7..... | 31 | 17..... | 0 | 27..... | *52 |
| 8..... | *30 | 18..... | 0 | 28..... | *b 36 |
| 9..... | Mc 22 | 19..... | 0 | 29..... | *Mac 63 |
| 10..... | 25 | 20..... | *8 | 30..... | *d 73 |

Mean, 30 days = 32.2

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR
DECEMBER 1942

| | | | | | |
|---------|--------|---------|-------|---------|--------|
| 1..... | 61 | 11..... | 29 | 21..... | 7 |
| 2..... | 57 | 12..... | 25 | 22..... | *Mc 18 |
| 3..... | *46 | 13..... | *a 20 | 23..... | 27 |
| 4..... | 35 | 14..... | 25 | 24..... | |
| 5..... | | 15..... | 25 | 25..... | |
| 6..... | Ecd 15 | 16..... | 15 | 26..... | |
| 7..... | 31 | 17..... | | 27..... | *12 |
| 8..... | 31 | 18..... | 8 | 28..... | 11 |
| 9..... | 26 | 19..... | 7 | 29..... | a 11 |
| 10..... | a 31 | 20..... | 0? | 30..... | 11 |
| | | | | 31..... | 11 |

Mean, 26 days = 22.9

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR
JANUARY 1943

| | | | | | |
|---------|-------|---------|-------|---------|-------|
| 1..... | 8 | 11..... | *14 | 21..... | d 25 |
| 2..... | 8 | 12..... | a .. | 22..... | 25 |
| 3..... | 8 | 13..... | 12 | 23..... | 15 |
| 4..... | *8 | 14..... | 9 | 24..... | Mc 25 |
| 5..... | *0 | 15..... | 0 | 25..... | 27 |
| 6..... | *d 15 | 16..... | 0 | 26..... | 10 |
| 7..... | *10 | 17..... | 11 | 27..... | 8 |
| 8..... | 14 | 18..... | Ec 19 | 28..... | |
| 9..... | 12 | 19..... | 26 | 29..... | 7 |
| 10..... | *17 | 20..... | 21 | 30..... | 0 |
| | | | | 31..... | 8 |

Mean, 29 days = 12.5

* = Observed at Locarno.

a = Passage of an average-sized group through the central meridian.

b = Passage of a large group through the central meridian.

c = New formation of a group developing into a middle-sized or large center of activity; E, on the eastern part of the Sun's disk; W, on the western part; M, in the central-circle zone.

d = Entrance of a large or average-sized center of activity on the east limb.

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, February 1943

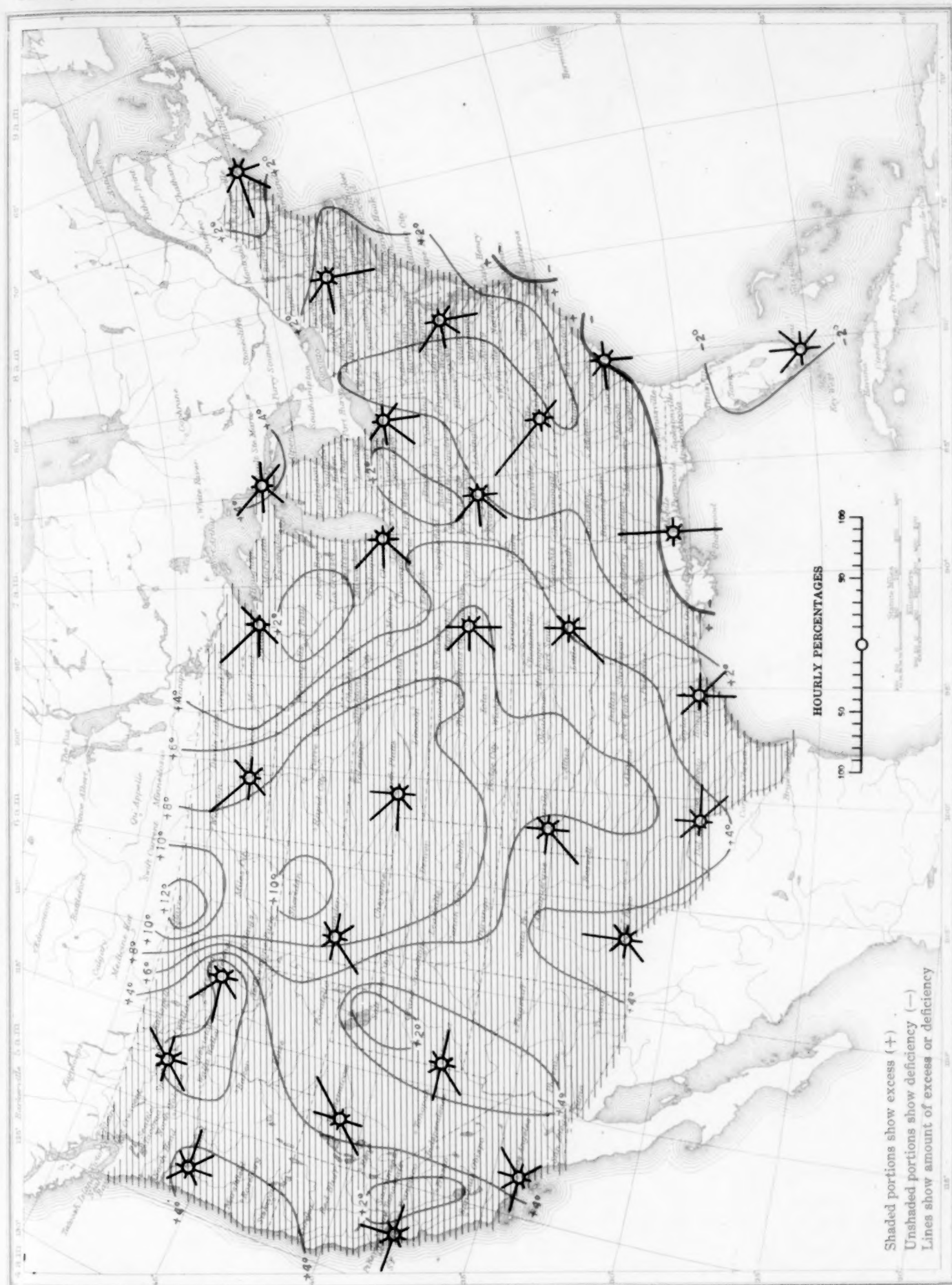
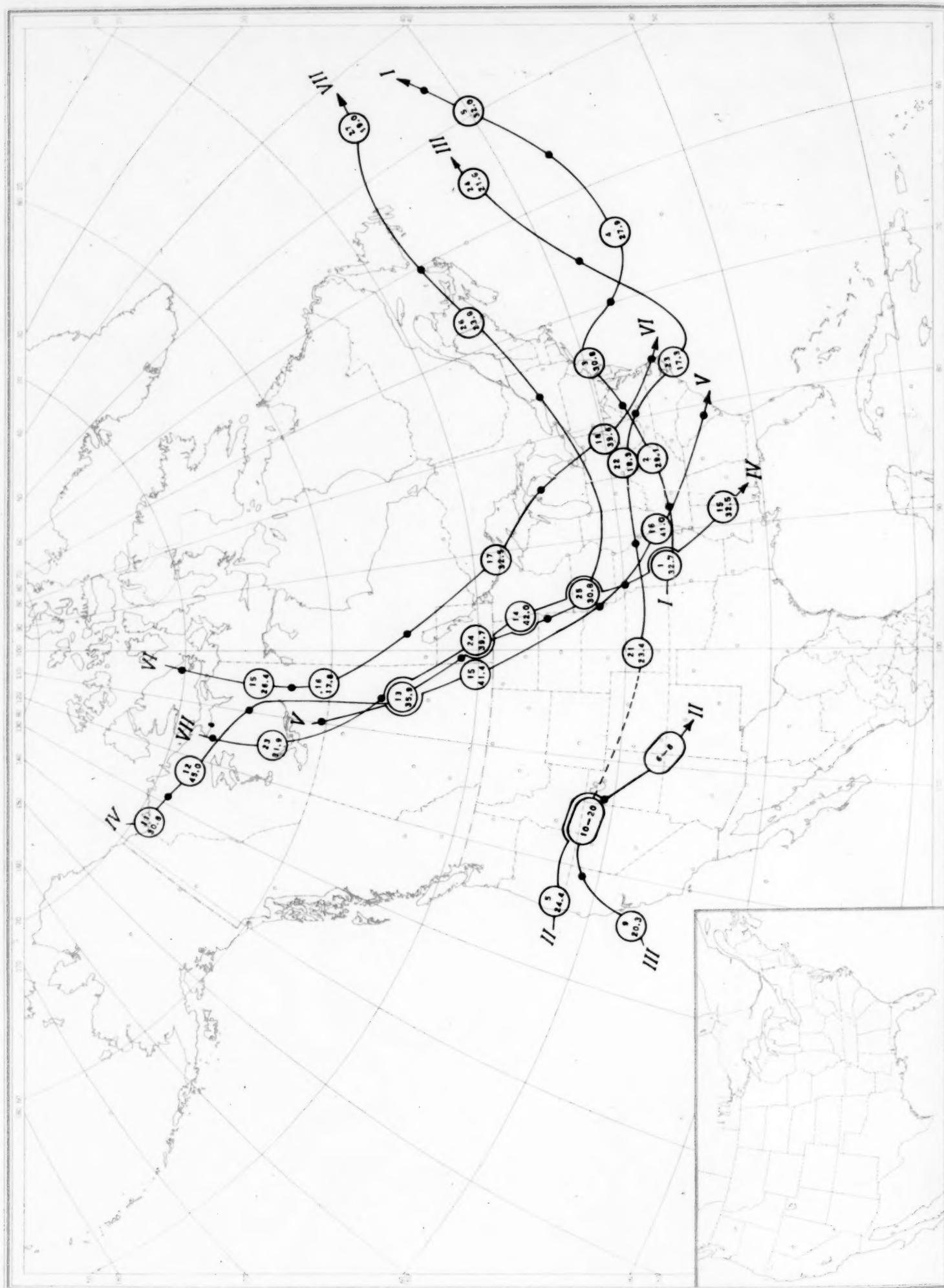


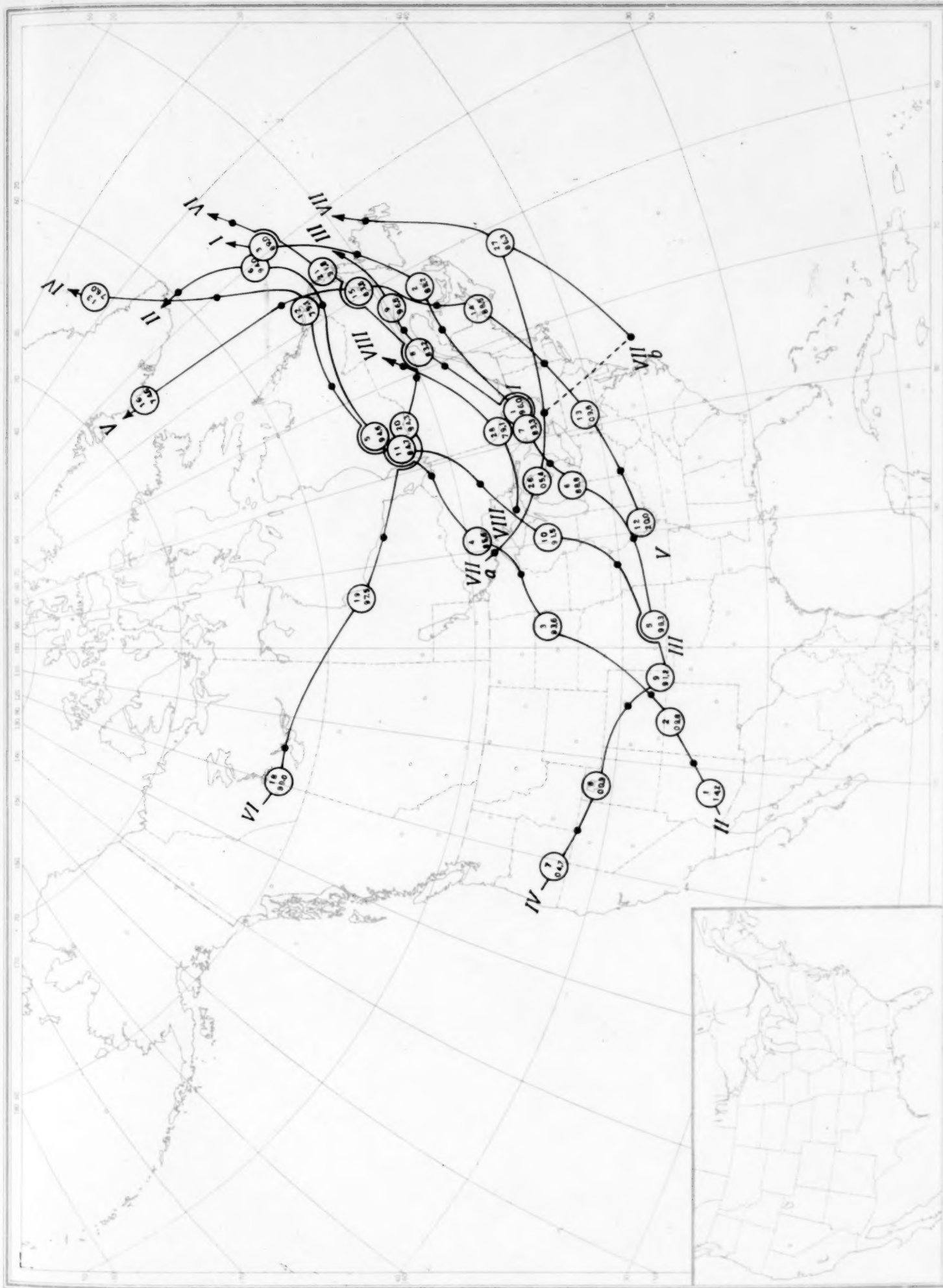
Chart II. Tracks of Centers of Anticyclones, February 1943.



Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, February 1943.

Chart III. Tracks of Centers of Cyclones, February 1943.



Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time). Dot indicates position of cyclone at 7:30 p. m. (75th meridian time).

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, February 1943

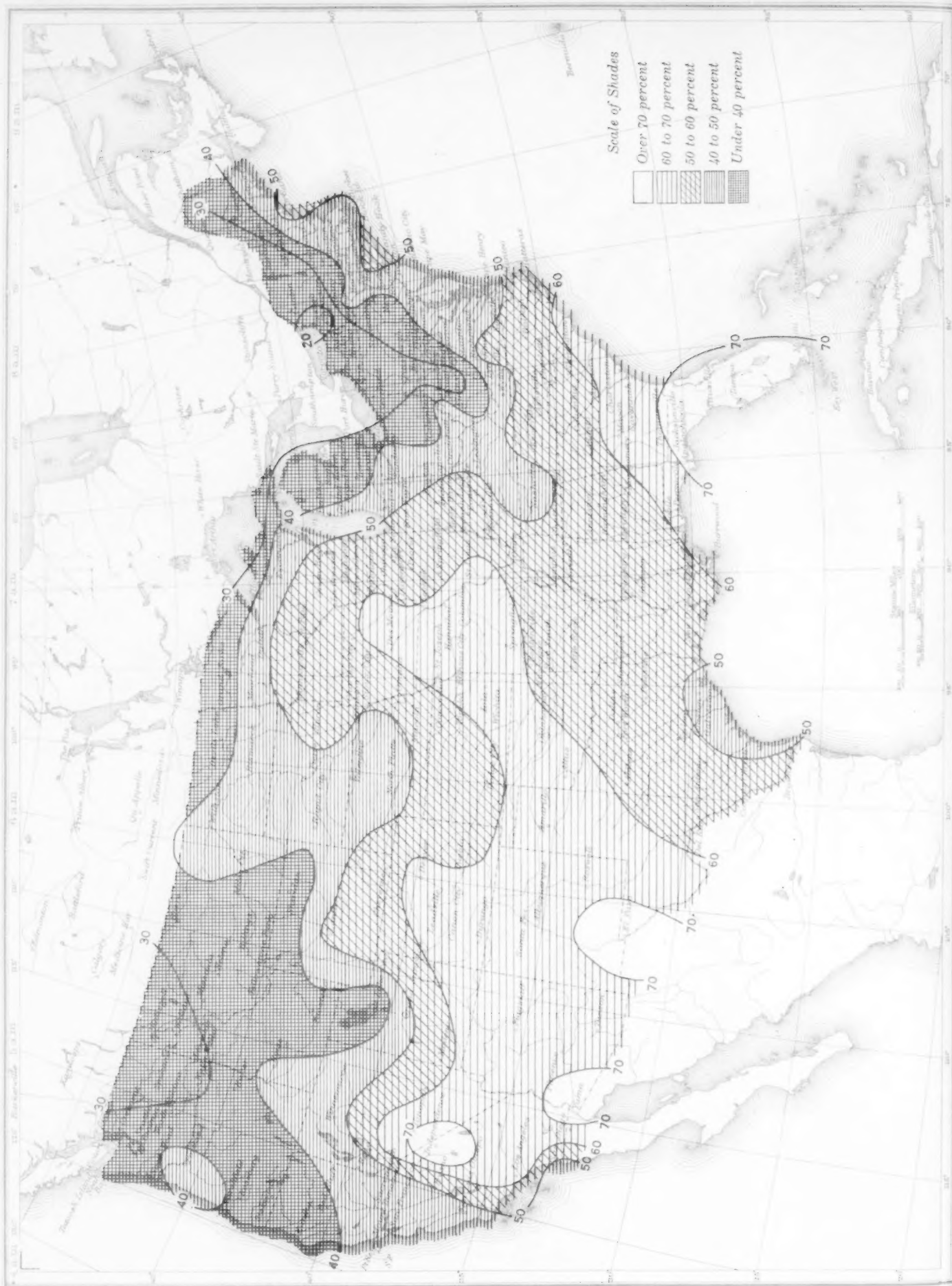


Chart V. Total Precipitation, Inches, February 1943. (Inset) Departure of Precipitation from Normal

Chart V. Total Precipitation, Inches, February 1943. (Inset) Departure of Precipitation from Normal

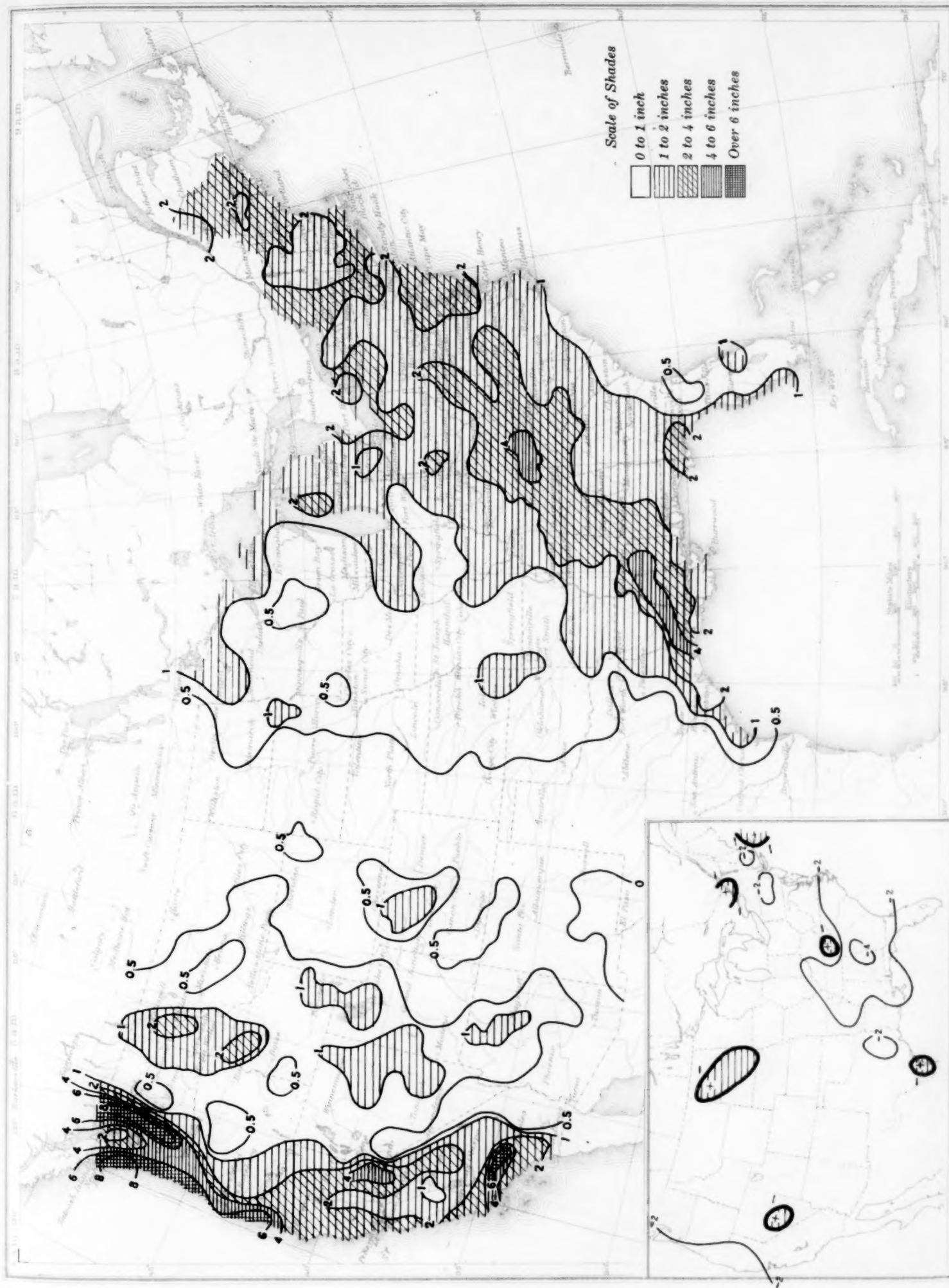


Chart VI. Isotherms at Surface; Prevailing Winds, February 1943

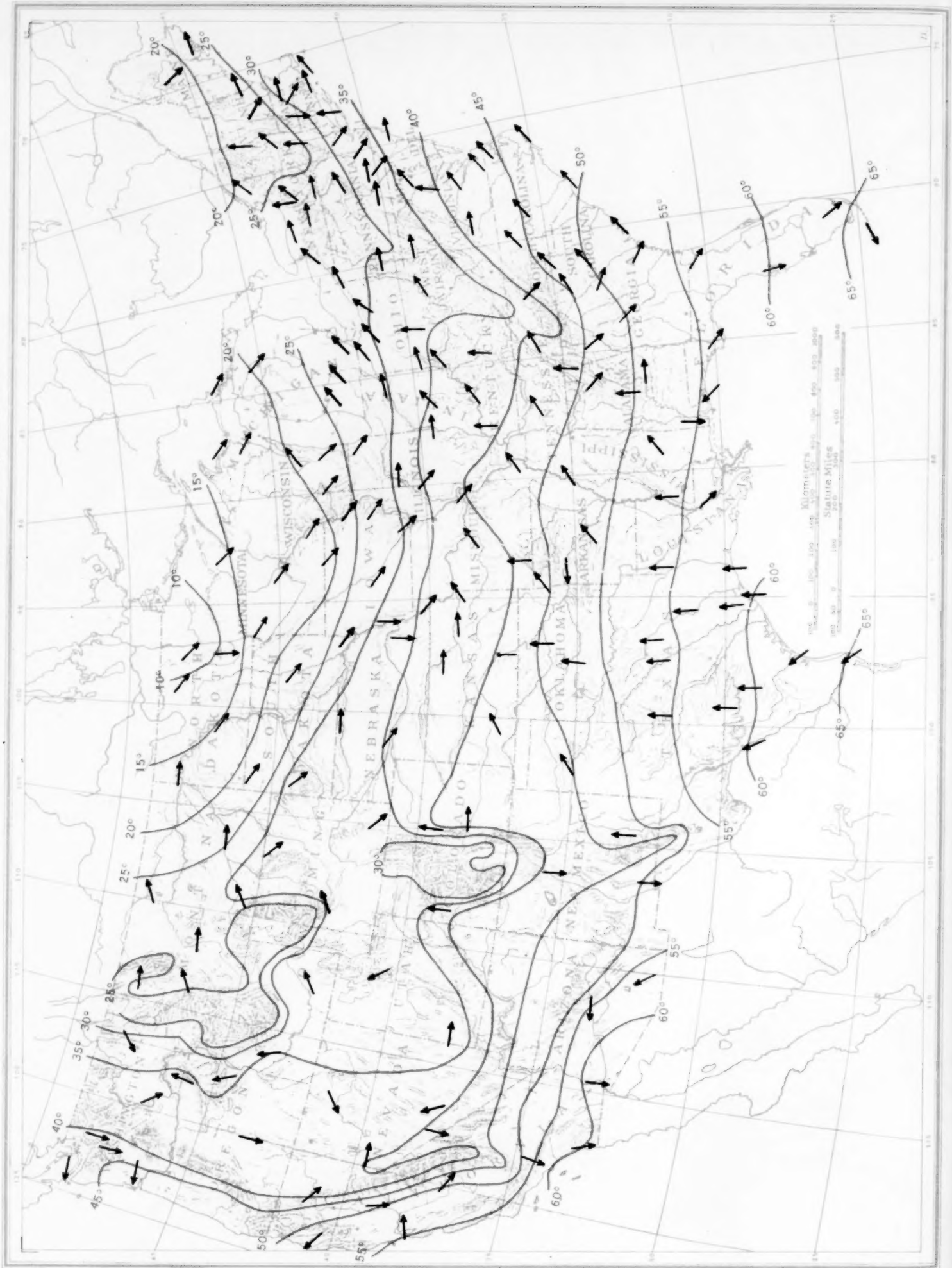


Chart VII. Total Snowfall, Inches, February 1943. (Inset) Depth of Snow on the Ground at 7:30 p. m., Monday, March 1 1943

